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WEST VIRGINIA UNIVERSITY

CATALOGUE 1890-1.

CATALOGUE

OF

WEST VIRGINIA

UNIVERSITY

MORGANTOWN

FOR THE YEAR 1890-1.

CHARLESTON
MOSES W. DONNALLY, PUBLIC PRINTER,
1891.

CALENDAR.

June, 1891---February, 1893.

1891	S	M	T	W	T	F	S
JUNE	...	1	2	3	4	5	6
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1892	S	M	T	W	T	F	S
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1893							
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UNIVERSITY CALENDAR.

The University year consists of three terms beginning for the year 1891–2, respectively as follows: The Fall term, Wednesday, September 9th, 1891; Winter term, Wednesday January 6th, 1892; and the Spring term, Wednesday April 6th, 1892. The annual commencement is on the second Wednesday of June.

1890.

June 1st–8th—Final examinations.

June 6th—Saturday, 8 P. M., Regents' Prize Contest in Declamation.

June 7th—Sunday, 11 A. M., Baccalaureate Sermon by Rev. J. J. Murray, D. D., in University Hall.

June 9th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 10—Wednesday, 10 A. M., Commencement.

" 1 P. M., Alumni Banquet.

Vacation till the second Wednesday in September.

September 8th—Entrance Examinations.

September 9th—Wednesday, 8:15 A. M., Fall Term begins.

November 26th—1 P. M., Thanksgiving recess begins.

November 30th—Monday, 8:15 A. M., Exercises resumed.

December 3d—Thursday, 7:30 P. M., Senior Orations.

December 16th—22d—Fall term examinations. Vacation of two weeks.

1892

January 6th—Wednesday, 8:15 A. M., Winter Term begins.

February 22d—Monday, Washington's birthday. Holiday.

February 25th—Thursday, 7:30 P. M., Senior Orations.

March 23d—30th—Winter Term Examinations. Vacation one week.

April 6th—Wednesday, Spring Term begins.

May 30th—June 6th—Final examinations.

June 4th—Saturday, 8 P. M., Regent's Prize Contest in Declamation.

June 5th—Sunday, Baccalaureate Sermon.

June 8th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.	Term Expires
1.	J. B. SOMMERVILLE	Wheeling	1891
2.	CLARENCE L. SMITH	Fairmont	1891
3.	J. C. Vance	Clarksburg	1892
4.	PEREGRIN HAYS	Glenville	1892
5.	JOHN G. SCHILLING	Spencer	1893
6.	EDWARD A. BENNETT	Huntington	1893
7.	WIRT A. FRENCH	Princeton	1894
8.	M. J. KESTER	Union	1894
9.	JAS. F. BROWN	Charleston	1895
10.	THOMAS J. FARNSWORTH	Buckhannon	1895
11.	JOSEPH MORELAND	Morgantown	1895
12.	JOHN A. ROBINSON	Patterson's Creek	1896
13.	W. W. BROWN	Kabletown	1896

Officers of the Board.

JOHN A. ROBINSON, PRESIDENT,
JOHN I. HARVEY, TREASURER,
W. P. WILLEY, SECRETARY.

Executive Committee.

JOHN A. ROBINSON, CHAIRMAN,
~~PEREGRIN HAYS~~, M. J. Kester
~~CLARENCE L. SMITH~~, J. C. Vance,
J. B. SOMMERVILLE,
T. J. FARSWORTH.

Superintendent of Grounds and Buildings.

JOHN A. MYERS.

FACULTY AND TEACHERS.

In the Order of Official Seniority.

E. M. TURNER, LL. D. PRESIDENT,
Professor of Rhetoric and English.

P. B. REYNOLDS, D. D., VICE PRESIDENT,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A., LL. D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages and Literature.

I. C. WHITE, A. M., PH. D.,
Professor of Geology.

A. W. LORENTZ, A. M.,
Principal of Preparatory Department.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence and History.

A. R. WHITEHILL, PH., D.,
Professor of Agriculture, Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., D. S.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, PH. D., 25TH INFANTRY, U. S. A.,
Professor of Mathematics and Military Science and Tactics.

THOMAS M. JACKSON, C. E., SC. D.,
Professor of Civil and Mining Engineering.

JOHN A. MYERS, PH. D.,
Director of the Experiment Station.

JAMES S. STEWART, M. S.,
Assistant Professor of Mathematics.

A. J. HARE, A. B.,
Assistant in Preparatory Greek and Latin.

B. C. ALDERSON, A. B.,
Assistant in Ancient Languages.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.,
Assistant in English.

JOHN L. JOHNSTON, C. E.,
Instructor in Applied Mathematics and Drawing.

E. H. VICKERS, A. B.,
Assistant in Preparatory Mathematics and English.

MISS CLARA HOUGH,
Librarian.

AGRICULTURAL EXPERIMENT STATION.

Official Staff.

JOHN A. MYERS, PH. D.....Director.

C. F. MILLSPAUGH, M. D.....Botanist and Microscopist.

D. D. JOHNSON, A. M.....Agriculturist.

R. J. J. DE ROODE, PH. D.....Chemist.

A. D. HOPKISN.....Special Agent in Entomology.

SUSIE V. MAYERS.....Stenographer and Book-Keeper.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Scrip" donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela river and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and by daily boat from Pittsburgh. It is expected that rail communication will be completed to Pittsburgh during the present year. Morgantown is a small place, where there are few temptations to allure young men from study, and is in this respect an admirable location for an educational institution. Its climate is healthful, the air pure and bracing and free from malaria. The town is supplied with pure mountain water by a system of water works, and with natural gas for fuel and illumination from the Mt. Morris gas wells.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures, three stories high, which contain the lecture and recitation rooms, library, museum, commencement hall, and the rooms of the two literary societies.

The Legislature at its last session made an appropriation of $5,000 for a building for a Mechanical department, and $15,000 to begin the construction of a building for the use of the Scientific departments of the University. When these buildings are completed and supplied with apparatus, the University will have a first class "plant" for carrying on the work of instruction.

It is expected, during the present calendar year, to complete the new building for an armory, gymnasium and commencement hall,

the old armory building having been turned over to the Experiment Station, and enlarged, to be used as a laboratory for Station work.

Organization.

The organization of the University includes the usual courses of collegiate study, the Classical and the Scientific; a Military Department; a Law School, leading to the degree of Bachelor of Laws; a school of Civil and Mining Engineering, leading to the degree of Bachelor of Engineering; a Preparatory Department, and the State Agricultural Experiment Station.

Endowment Fund: Income.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each county being entitled to one student under free tuition for every five hundred population in the county. This does not apply, however, to the Law School.

Additional Endowment.

By an act of Congress passed August 30th, 1890, there is appropriated for the year ending June 30th, 1890, to each State and Territory the sum of $15,000, for the further endowment of the Agricultural Colleges established under the act of Congress of July 2, 1862. The appropriation is an annual one, and increases $1,000 per year until it reaches a maximum of $25,000, after which the annual appropriation is to be $25,000. The University is the beneficiary of the act for this State. This act requires that each State shall, as a condition of receiving the benefits thereof, make provision for the instruction of colored youth in Agricultural and Mechanical sciences. The Legislature of this State at its recent session, established such an institution in the county of Kanawha, and appropriated $3,000 annually for the first five years, and $5,000 annually thereafter, from this fund, to assist in its maintenance. The remainder of each annual appropriation comes to the University. By the provisions of this act, the fund can be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

Other students are allowed to enter the Corps as volunteer cadets.

The Calendar.

The University year begins on the second Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall term begins on the second Wednesday of September and ends as nearly as may be three days before Christmas. A vaca-

tion of two weeks follows. The Winter term then begins and continues twelve weeks, followed by a vacation of one week. The Spring term then begins and closes with the commencement exercises.

Requisites for Admission.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Students coming from the Normal School or any of its branches, or from approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue under the "Preparatory Department."

VI. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VII. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally.'

VIII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating beyond the time allowed for so doing, he will not thereafter be allowed to enroll, except by special permission of the Faculty, upon the presentation of a satisfactory explanation.

Admission of Female Students.

At the meeting of the Board of Regents in June, 1889, the Collegiate Department of the University was opened to female students. In order that those desiring to avail themselves of this action may be properly advised as to the conditions of admission, the Faculty have adopted the following order:

Any young woman who presents evidence of having completed, in other schools, the studies required in the Preparatory Department of the University or their equivalent, shall be allowed to enter the Colle-

giate classes upon passing the required examinations. If not presenting such testimonials and passing such examinations in all these studies, she shall be admitted to such college classes as she may be prepared to enter; *provided* there are at least two such classes occupying in the aggregate not less than ten recitation hours per week; and provided further, that she shall be *conditioned* to pass examinations in all preparatory studies (including Latin) of the *first* Preparatory year within one year from the date of entrance, and in those of the *second* Preparatory year within *two* years from the date of entrance. But if such applicant is a candidate for a degree, she shall, upon entrance, pass successfully the examination in a *majority* of the studies required for admission to the Collegiate Department.

Under these regulations the following collegiate classes are open to young women, who are not prepared to enter the collegiate classes in Latin, Greek or Mathematics, namely: History, Physics, Chemistry, Junior English, Anatomy, Zoology, and Field Botany.

But, in order to enter the class in History, the applicant must have sufficient age and general culture to pursue the study profitably. To enter the class in Physics or Chemistry, the applicant must have completed Arithmetic, including the metric system of weights and measures, and elementary Algebra; and in Physics, also three books of Geometry; provided, that if the applicant has not studied Geometry, she may enter the class in Physics by taking up the study of Geometry at the same time. To enter the class in Junior English, the applicant must have completed the English studies of the Preparatory Department or *their equivalent.*

Entrance Examinations.

All new students are expected to be present on the day preceding the opening of the Fall Term, beginning for this year September 8th in order to be examined on the studies required for admission and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than 9 o'clock A. M., on September 8th, and be by him directed to the examiners in the various branches.

Directions for New Students.

Students who have not before attended the Univerity should, on arriving, report to the President, who will assist them in procuring rooms, and give them directions as to the payment of fees, matriculation, enrollment and selection of their studies.

Matriculation and Tuition Fees.

All students, except appointed cadets, are required to pay a matriculation fee of $5.00 when entering the University. This applies to all departments.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Matriculation fee,.....$5 00
Tuition in the Law Department (per term)..... 8 00
Contingent fee in all Departments (per term)..... 2 00

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

All fees must be paid to the Treasurer, promptly on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever, except protracted illness.

Ministerial students are admitted free, upon proper testimonials.

Regulations Concerning Text Books issued to Cadets.

Under the laws governing the University, appointed cadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with which he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book agent and re-issued so long as they may serve the purpose of text books.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as steward and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of forty weeks.

Room rent.....	from	$31 00 to	$ 52 00
Boarding.....	"	70 00 to	103 00
Washing.....	"	11 00 to	16 00
Lights and Incidentals.....	"	20 00 to	20 00
Text Books (average).....	"	8 00 to	15 00
Total.....		$140 00	$206 00

To this add matriculation fee of $5 00 for the first year, the tuition fees of those students who are required to pay tuition, and contingent fee of $2 00 each term.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. *No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.*

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises.

A report is sent at the beginning of each year to parents and guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is specially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interests of the student and of his class-mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Religious Worship.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject.

"*Resolved*, That each student will be required to attend on Sabbath the public service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University schools, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations.

1. A student competing for the prize shall write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.

2. All essays shall have fictitious signatures, accompanied with a sealed letter containing both the real and fictitious names.

3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.

4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15.00 for Declamation, shall be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1890, these prizes were awarded as follows: Essay, Mr. C. C. Coffman; Declamation, Mr. M. E. Gorman.

Library and Reading Room.

About five thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works of the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general literature.

The friends of education are respectfully requested to make contributions to its shelves.

A deposit of $2.00 is required of all students who wish to avail themselves of the privilege of the library. This is intended to secure the safe keeping and return of the books borrowed.

The Library has been removed to the large room formerly used as the Chapel, and is now open every day from 8½ A. M. to 12 M., and from 2 to 5 P. M. for the delivery of books and for consultation. Part of the room is used as a Reading Room, which is supplied with the leading magazines and periodicals of this country and Europe.

A large and valuable addition of books in the various departments of Science and Literature has been added to the Library during the year.

Books of reference are not allowed to be taken from the Library; so that they are accessible for consultation at all hours.

Arrangements are also made by which books on special subjects are temporarily withdrawn from circulation when required for the use of students in any special study, or for the preparation of essays required in connection with the regular class-work.

Museum.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology.

Literary Societies.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate

and Criticism, are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

Collegiate Department.

COLLEGIATE DEPARTMENT.

Faculty.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric and English.

P. B. REYNOLDS, D. D.,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A., LL. D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, PH. D.
Professor of Modern Languages and Literature.

I. C. WHITE, PH. D.
Professor of Geology.

ST. GEO. T. BROOKE, LL. D.,
Professor of Inter. and Const. Law.

W. P. WILLEY, A. M.,
Professor of History.

A. R. WHITEHILL, PH. D.,
Professor of Agriculture, Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., D. S.
Professor of Biology.

1ST. LIEUT. EDWARD S. AVIS, PH. D., 25TH INFANTRY, U. S. A.,
Professor of Mathematics.

B. C. ALDERSON, A. B.,
Assistant in Ancient Languages.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.,
Assistant in English.

COURSES OF STUDY IN THE COLLEGIATE DEPARTMENT.

Two regular courses of study are offered in the Collegiate Department, leading to the degrees of Bachelor of Arts and Bachelor of Sciences.

The details of the requirements for these degrees, and of the courses of study for each of them, are given on subsequent pages.

Besides the regular courses for degrees, students who do not expect to stand for a degree are allowed under advice of the Faculty, to select such studies in the Collegiate Department for which they are prepared as may be preferred by them and are adapted to their life-work. All students are, however, advised to take a regular course as far as possible.

The course of study for the Bachelor's degrees is intended to cover four years. Students who undertake to complete the course in less time must necessarily burden themselves with work to such an extent that they have no time for reading or research outside of the regular class room work. The widened field of study and research in all departments of knowledge makes it impossible, in a college course covering the usual curriculum of study, to do more than give the main facts embraced in the great departments of Philosophy and Science, which must be supplemented by the independent study of the student. If his time is all taken up in preparing recitations, he has no time for specializing his work in any department which may be particularly attractive to him, or in the line of his subsequent work.

Requirements for Admission.

To enter the Collegiate Department, students must have completed the course required for admission, as stated in the course of study for the Preparatory Department, or its equivalent; *provided*, that students who have not completed all the preparatory studies will be required to take, first, the studies of the Preparatory Department in which they are deficient; and, in addition to these, they may take such studies in the Collegiate Department as they are prepared to take, under the advice of the Faculty.

The course of study in the Preparatory Department will be found in the latter part of this catalogue.

Selection of Studies.

Each student in the Collegiate Department is required to attend fifteen recitations per week, and to adhere, *throughout the year*, to the studies selected, unless the Faculty, for good cause shown, allow him to attend a less number, or make an exchange.

Students will be classed in the several subjects of study, according

to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

Distribution of Studies.

The subjects of study in the Collegiate Department are distributed into ten groups as follows:

Rhetoric, English, Metaphysics, Ancient Languages, Modern Languages, Geology, History, Mathematics, Agriculture, Chemistry and Physics and Biology.

Examinations.

Written examinations are held in each class at the close of each term, and at such other times as each Professor may deem necessary; *provided*, such special examinations shall not interfere with other classes.

The time allowed for examination shall not be less than two hours, and not more than five hours.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

When a student has attended the examination in any class and has failed to pass, no second examination will be allowed such student except by permission of the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10 in any subject extending throughout the whole year, who is absent, for some unavoidable cause, from the regular examinations held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and provided further, that such exemption from examination will not be allowed for more than one term in any academic year.

Grading.

Recitations and examinations are graded on a scale of 10. In order to pass from a lower to a higher class in any subject, a student must attain an average standing of 7 on a scale of 10, for each term in that class during the year.

In ascertaining a student's standing in his classes, examination marks count one-half and recitation marks one-half.

All absences from recitations are counted against the student in estimating his standing in his classes, except absences on account of sickness or other unavoidable cause, which may be excused by the faculty.

Requirements for Degree of Bachelor of Arts.

The degree of Bachelor of Arts requires the completion of the following course of study with an average standing of 7 each term in each of the studies named in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

(NOTE.—The figures in parenthesis indicate the number of recitations per week. The hours for recitation are designated in the *Schedule of Recitations* at the end of this statement While students are not required to confine themselves strictly to the order of study as here laid down, in making their selections, they are advised to do so, in order to avoid conflicts in hours, as the schedule of recitations is arranged to suit this order, and changes will not be made to accommodate those who make a different selection.)

In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Book-keeping.*

Bachelor of Arts Course.

FIRST YEAR STUDIES.

Junior Latin (3); Junior Greek (3); Junior Mathematics (4) (Fall and Winter Terms); Junior English (3); Physics (3).

SECOND YEAR STUDIES.

Intermediate Latin (3); Intermediate Greek (3); History (2); Inorganic Chemistry (3). *Fall and Winter Terms.* Rhetoric (2); Botany (2).

THIRD YEAR STUDIES.

Fall and Winter Terms. Senior Latin (elective) (2); Senior Greek (elective) (2); Junior German (elective) (5); Junior Metaphysics (3); Senior English (2); Zoology (3); Geology (2).

Spring Term. Drop Zoology and take Political Economy (3).
Three literary performances during this year, under the Professor in English.

FOURTH YEAR STUDIES.

Required Studies. Metaphysics (3); Anatomy, Physiology and Hygiene (2). Two original public performances during the year, and one at commencement.
Elective Studies. (Student selects 10 hours from this list.) Senior German (3); Junior French (5); Anglo Saxon (2); Polit. Economy (2); Political Science (2); Inter. and Const. Law (2); History of Philosophy (2); Agriculture (2); Microscopy (2); Practical Physics (2); Anatomy (3); Historical Psychology (2).
NOTE.—Students must present their elections to the Faculty during the first week after the opening of the Fall Term.
The various subjects and text books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Requirments for Degree of Bachelor of Sciences.

The degree of Bachelor of Sciences requires the completion of the following course of study, with an average standing of 7 each term in each of the studies named in the respective years.
This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.
In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Greek.*

FIRST YEAR STUDIES.

Junior Mathematics (4); Junior English (3); Junior French (5); Physics (3).

SECOND YEAR STUDIES.

Senior Mathematics (3); Senior French (3); Chemistry (3); Rhetoric (2); Field Botany (2); Applied Mathematics (elective) (2); History (elective) (2).

THIRD YEAR STUDIES.

Junior Metaphysics (3); Junior German (5); Zoology and Structural Botany (5); Geology and Minerology (2).

In the Spring Term, Political Economy (3), takes the place of Zoology (3).

Three literary performances during the

FOURTH YEAR STUDIES.

Required Studies. German (3); Metaphysics (3); Anat. Phys. and Hygeine (2). Two original public performances during the year, and one at commencement.

Elective Studies. Anglo-Saxon (2); Polit. Economy (2); Political Science (2); Inter. and Const. Law (2); History of Philosophy (2); Agriculture (2); Microscopy (2); Practical Physics (2); Anatomy (3); Historical Psychology (2). Ten hours elective work must be selected by the student from the above list.

NOTE.—Students must present their elections to the Faculty during the first week after the opening of the Fall Term.

The various subjects and text-books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Post-Graduate Courses.

MASTER OF ARTS.

The deree of Master of Arts will hereafter be given to Bachelors of Arts, who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

MASTER OF SCIENCES.

The degree of Master of Sciences will hereafter be given to Bachelors of Science who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

Degrees Conferred—June 10, 1890.

HONORARY DEGREES.

LL.D.—Prof. R. C. Berkeley, West Virginia University.
PH.D.—Prof. John I. Harvey, West Virginia University.
PH.D.—Prof. E. S. Avis, West Virginia University.

DEGREES IN COURSE, 1890.

Master of Arts: Wayland F. Reynolds.
Bachelor of Arts: Harvey Brand, Frank W. Clark, Laurence Corbly, Frank C. Reynolds, Enoch H. Vickers, Elmore E. Woodson.
Master of Sciences. Bert H. Hite.
Bachelor of Laws: Andrew S. Alexander, James E. Chipley, Frank H. Garrett, David L. Jamison, Robert L. Keadle, Tucker H. Ward.

ANNOUNCEMENTS

OF THE

COURSE OF INSTRUCTION

BY THE

PROFESSORS IN THE COLLEGIATE DEPARTMENT.

Rhetoric and English.

THE PRESIDENT AND MR. OGDEN.

The instruction in English and Rhetoric runs through the entire collegiate course.

In the first year Mr. Ogden gives instruction during the fall term in the elementary principles of Rhetoric, giving special attention to the subjects of diction, the sentence, figurative language, and versification, with practical exercises in composition, using Genung's Practical Rhetoric as the text book.

During the winter term attention is directed to the history and development of the English language, as presented in Lounsbury's history and Trench's English Past and Present, which are used as texts.

During the spring term an introductory course in English literature is given, in the study of Shaw's Manual and Swinton's studies in English literature.

This course occupies three hours a week throughout the year, and is required of all candidates for bachelor's degrees.

In the second year of the course, the subject of Rhetoric is continued in the study of discourse, in its principles, laws, processes and forms, with reference to its logical basis, and its application to literature. Analyses of themes and essays are required throughout the year. This course is conducted by the President and is required of all undergraduates. Text: Genung's Rhetoric. Two hours a week throughout the year.

In the third year Mr. Ogden conducts a series of critical studies of selected authors and periods of English literature. Besides the regular text work each student is required, each term, to read for discussion before the class, a critical paper on the life and writings of some designated author. In this way it is sought to apply the principles of literary criticism taught in the class room.

The principal authors studied during the current year were, Addison, DeQuincey, Macaulay, Carlyle and Irving among prose writers, and in poetry, Chaucer, Shakespeare, Milton and Longfellow.

The course occupies two hours a week through the year and is required of candidates for A. B. To others it is optional.

Texts, Minto's Prose Literature and Poets, Garnett's Prose Selections, English Classics Texts.

In the fourth year, an elective course in Anglo-Saxon is conducted by Mr. Ogden. The grammar is first carefully studied, and the class then proceeds to the reading of Anglo-Saxon literature. The relations of Anglo-Saxon to English are made a constituent part of the course.

Two hours a week throughout the year.

Texts: Sweets' Primer and Reader, Selections from Library of Anglo-Saxon Poetry (Ginn & Co.).

The courses in English and Rhetoric are intended to be taken in the order given above, and students must complete the preceding work in order to enter the higher classes.

THE ENGLISH SOCIETY—Composed of students in the English course and others for the prosecution of special studies on subjects requiring research has been organized by Mr. Ogden during the current year. It is proposed to continue it during the next year. Its meetings will be held bi-weekly on Monday evening. The original papers, reports and answers to queries, read before the society are written on paper of uniform size and bound into a volume at the close of each college term. Prizes for meritorious work are offered for competition.

Political Economy.

THE PRESIDENT.

Political Economy has heretofore been part of the regular English course. It is now made distinct. During the Spring term of the third year of the collegiate course three hours a week. are given to an elementary course in the Principles of Political Economy. This course is designed to open up the subject to the student by a general survey of the field and the exposition of the leading divisions with such incidental discussions of economic problems as is adapted to stimulate interest in the subject. Text: Chapin.

In the fourth year an elective course is offered, occupying two hours a week during the year, for such students as desire to go further into the subject. In this course the principles of the science are applied to practical economic problems, and the limitations of theoretical views are made prominent. The student is encourged to investigate for himself and form his own conclusions. Current economic problems, as labor strikes, the currency, the silver question, the tariff, trusts, &c., are discussed by the class. Text: Walker.

SCHOOL OF METAPHYSICS.

PROF. REYNOLDS.

The subjects studied in this school are arranged as follows:

1. *Junior, for Elementary Course*—This course will take three hours per week through the year, and includes the elements of Psychology, Deductive Logic and Ethics. Text books: Hill's Elements of Psychology, Jevons-Hill's Elements of Logic, Robinson's Principles and Practice of Morality, and lectures by the Professor.

2. *Senior, or Advanced Course*—This course will require three hours per week through the year, and includes Metaphysics, Inductive Logic and Principles of Science or applied Logic. Text books: McCosh's First and Fundamental Truths, Jevons' Principles of Science with references to Fowler, DeMorgan, Mill and Hamilton.

3. *Elective Course in Mental Evolution*—Two hours a week through the year will be given to this course. It includes studies in Physiological Psychology, or the development, structure and functions of the

brain and nervous system; in Comparative Psychology, or the rise, growth, gradations and comparison of the mental faculties in animals and man; in Historical Psychology, or mental development as exhibited in the growth of language, arts and institutions. The instruction will be mainly by lectures, with references to the works of Ladd, Luys, Carpenter, Romanes, Bascom and Tylor.

4. *Elective Course in the Science of Religion*—This course will take two hours a week through the year, and includes the discussion of the following subjects:

Theism—the evidence in nature of the existence and attributes of God; Religion—Natural, Comparative and Christian, and its relation to ethics, society and civilization; Natural Ethics—the scientific basis of morals. Text books: Purinton's Christian Theism, the Professor's Lectures, with references to the works of Fisher, Harris, Clark, Max Muller, Bruce, Drummond and Spencer.

5. *Elective Course in the History of Philosophy*—From two to three hours a week through the year will be given to this course:

The exercises will consist of the examination and discussion of the leading schools of thought of ancient, medieval and modern times, as presented in the best works on these subjects. The class meetings will be arranged to suit the convenience of students taking the course. Only graduates of the School of Metaphysics and those taking the senior course are eligible.

Ancient Languages.

PROF. BERKELEY: MR. ALDERSON.

The subjects taught in this school are:

1. The Latan Language and Literature, in which there are three classes, viz; *Junior*, *Intermediate* and *Senior*.

Text books used:

1. JUNIOR CLASS: MR. ALDERSON.

Fall Term.—Virgil's Bucolics and Georgics.
Winter Term.—Horace's Odes and Epodes.
Spring Term.—Cicero de Senectute and de Amicitia.

2. INTERMEDIATE CLASS: PROF. BERKELEY.

Fall Term.—Livy; Wilkins' Roman Literature.
Winter Term.—Horace's Satires and Epistles.
Spring Term.—Cicero de Officiis.

3. SENIOR CLASS: PROF. BERKELEY.

Fall Term.—The Agricola and Annals of Tacitus.
Winter Term.—The Annals of Tacitus (continued).
Spring Term.—Juvenal.

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—Harper's or White's.

2. The Greek Language and Literature, in which there are also three classes, viz: *Junior*, *Intermediate and Senior*.

Text books used:

1. JUNIOR CLASS: MR. ALDERSON.

Fall Term.—Herodotus.
Winter Term.—Homer's Iliad.
Spring Term.—Homer's Odyssey.

2. INTERMEDIATE CLASS: PROF. BERKELEY.

Fall Term.—Xenophon's Memorabilia; Jebb's Greek Literature.
Winter Term.—Plato's Apology and Crito.
Spring Term.—Euripides.

3. SENIOR CLASS: PROF. BERKELEY.

Fall Term.—Demosthenes.
Winter Term.—Sophocles.
Spring Term.—Thucydides.

As mentioned above, in the case of the Latin language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading.

Lexicon Recommended for each Class—Liddell's and Scott's—the abridged edition for the Junior—the unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin according to the so-called Roman method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

Modern Languages.

PROF. HARVEY.

In this School are taught French and German. In each Language there are two classes, Junior and Senior. The Junior Classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior classes meet five times a week. Senior classes meet two or three times a week.

For admission to this school, students *must have completed* the course of study in English and Latin of the Preparatory Department or their equivalent.

Text Books:

JUNIOR FRENCH.

Fall Term.—Whitney's or Edgren's Grammar, Super's Reader.
Winter Term.—Grammar continued, Reader continued.
Spring Term.—Grammar continued, Colomba, Picciola, or selections from modern authors.

SENIOR FRENCH.

Fall Term.—Sand's La Petite Fadette, or other selections; Grammar and exercises.
Winter Term.—Corneille's Le Cid, Racine's L'Athalie, Molier L'Avare begun; Grammar and Exercises.
Spring Term.—L'Avare finished; Hugo's Ruy Blas or Hernani, other selections; Saintbury's French Literature.

JUNIOR GERMAN.

Fall Term.—Joynes-Meissner's or Van der Smissen-Fraser's Grammar and Joynes' Reader.

Winter Term.—Grammar continued, Reader continued.

Spring Term.—Grammar continued, Schiller's Jungfrau von Orleans, or Wilhelm Tell.

SENIOR GERMAN.

Fall Term.—Lessing's Minna von Barnhelm, Uhland's Herzog Ernst; Grammar and Exercises.

Winter Term.—Goethe's Hermann and Dorothea; Freitag's Journalisten; Grammar and Exercises.

Spring Term.—Goethe's Iphigenie, Fouque's Undine, or other selections; Taylor's German Literature.

GEOLOGY AND MINERALOGY.

PROF. WHITE: MR. BROWN.

By a recent order of the Board of Regents, the course in Geology is now extended over two terms instead of one as formerly, and one term in Mineralogy and one in Physical Geography are added.

A special course in Stratigraphical Geology is also given to Engineering students who have taken Dynamical Geology in the Fall Term.

The regular class in Geology will meet Tuesday and Thursday during the Fall and Winter Terms. The special class in Stratigraphical Geology on Mondays and Fridays during the Winter and Spring Terms—Mr. Brown.

The class in Physical Geography will meet on Monday and Wednesday, and the class in Mineralogy will meet on Tuesday and Thursday during the Spring Term:—Mr. Brown.

Mineralogy is required of those applying for the degree of B. E. or B. S.

To enter the course in Geology, proficiency in Chemistry, Botany, and Zoology is required of all except candidates for the degree of B. E. of whom only Chemistry is required.

In addition to this regular required work for the Academic degrees, an advanced course in Practical Geology will be given by Prof. White to any students who desire to become specialists. This course will include original research in the construction of sections, tracing of strata, and the making of Geological maps of particular districts, as well as reports on the fossils, minerals and other features of the geologic terranes. There will be no stated meetings of the classes in this course, but the members will report their work to Prof. White for criticism and correction, as well as guidance.

EXCURSIONS.

Local excursions, on Saturdays especially, will be made by the regular classes during the Fall and Spring Terms, and during the Spring Term of each year, usually about the middle of May, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivaled facilities for the study of all problems connected with this useful science, and special attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific

Department of the University, but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

Text books:

Geology, Leconte's Elements. For reference: Dana's Manual, Lyell's Principles, and Geike's Text Book.

History and Political Science.

PROF. WILLEY.

The course of instruction in this school is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study extends through three terms, the class reciting three hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text-books are Myer's Ancient, Mediæval and Modern histories; with *reference* to Ridpath's Encyclopædia of Universal History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays, (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the second and third terms on "Civics," tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the governmental machinery of modern towns, counties, states and nations.

Political Science.

An elective course in Political Science is given in this department when a sufficient number of students offer to form a class. The course will be supplemental to the series of lectures on Civics delivered to the class in History, and is open only to those who have taken the course in History.

Agriculture, Chemistry and Physics.

PROF. WHITEHILL.

Instruction in the several departments of this school is by text-books, lectures and experiments. The courses in General and Practical Physics and General and Analytical Chemistry are continued throughout the year; the course in Agriculture is completed at the end of the Winter term.

In *Agriculture*, the attention of the class is directed to the following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, sub-soiling, manures, grain and forage crops, the care and management of stock, etc.

The new edition of Emerson and Flint's Manual of Agriculture is used as the text-book, and the subject matter is illustrated as far as possible, by experiments in the laboratory.

In *Physics*, as a preparation for after study, the leading principles of Mechanics are studied during the Fall term. During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced largely throughout the course, and the modern doctrines of Molecular Physics are fully explained. Students may enter the class at the beginning of any term, but the entire course requires one year for its completion.

The revised edition of Peck's Ganot is used as the text-book, and the text is supplemented by numerous problems and experiments drawn from other sources. The works of Arnott, Deschanel and other well known authors are in the laboratory, as books of reference.

In *Practical Physics*, the course is intended to aid the student in acquiring skill in the use of Physical apparatus, and is open to those who have taken the course of General Physics in the University, or who can stand an examination on the matter contained in the text books of the grade of Avrey's Natural Philosophy or Gage's Elements of Physics. So far as the apparatus permits practical work in dynamics, sound, heat and light is undertaken, and the elements of electrical engineering receive attention.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

In *Analytical Chemistry* facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals, and are required to spend from one to two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work. During the Spring term especial attention is directed to some of the more important medical preparations and to the analysis of waters; and an elementary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in an elementary work on the subject named.

Students in the several classes of this department have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Brush Dynamo, 3 Trœmer balances, Jolly balance, 2 Ruhmkorff coils, Holtz and plate electrical machines with accessories, Leyden and galvanic batteries, Geissler tubes, microscope, spectroscope, polariscope, heliostat, colorimeter, 2 air pumps with accessories, sonometer, convex and concave mirrors, radiometer, meteorological instruments, apparatus for electroplating and gas analysis, telephone, telegraphic instruments, combustion furnaces, photographer's outfit, models, pulleys, pendulums, etc.

School of Biology.

PROF. HARTIGAN.

The course of study in this school requires two years. In the first year, Zoology and Structural Botany are studied; and in the second Human Anatomy, Physiology and Hygiene.

FIRST YEAR—ZOOLOGY AND STRUCTURAL BOTANY.

Fall and Winter Terms—Zoology is studied during these terms. In the Fall term, Comparative Zoology is considered, while the Winter term is devoted to the study of Systematic Zoology and Histology. Each student in this branch is required to skelotonize five vertebrate animals; and all students except candidates for the degree of Bachelor of Arts, are required to prepare, cut, stain and mount for microscopical examination, a certain number of specimens of the various animal tissues.

Text-books in Zoology: Orton, Packard, Claus; and the works of Darwin, Haeckel and Spencer for reference. In Histology, Klien, Stricker, Shafer, Cornie and Ranvier.

Structural Botany is also studied during the Fall and Winter terms, the class reciting twice a week. The General Anatomy and Physiology of plants will first be studied, and then the special Anatomy and Physiology of plant tissue, together with the microscopical examination of these, and practical work in Bacteriology.

Text-books and books of reference: Bessey's Structural Botany; Gray, Sachs, Bently, Cooke, Crookshank's Bacteriology, Dawson's Geological History of Plants.

SECOND YEAR—ANATOMY, PHYSIOLOGY AND HYGEINE.

Fall and Winter Terms.—Five lectures are given weekly on General, Descriptive and Surgical Anatomy during the Fall and Winter terms. While each lecture on this branch of Anatomy will be fully illustrated by models, charts, specimens, manikins and every other means tending to impress the facts upon the student's mind, the skeleton or cadever will furnish the proper text for every lecture.

Practical Anatomy.—As a thorough knowledge of Anatomy can only be obtained by dissecting, every student in this branch of Anatomy is required to dissect at least one part of a subject one term. This constitutes a full course of dissection, and will be certified to by the demonstrator in charge, after the student has passed a satisfactory examination on the parts dissected. The dissecting room of the University is large, thoroughly equipped, well ventilated and lighted and is heated by steam, so that any desired temperature can be maintained, thus preventing the freezing and thawing of subjects during the colder months, which is so detrimental to their usefulness.

This room will be opened four nights in the week, from 7 till 10 o'clock during the Fall term, and from 6 till 9 o'clock during the Winter term. A demonstrator will be present each night. Material for dissection is furnished free.

NOTE.—Candidates for Bachelor's degrees are required to take the course in General Anatomy only. Those intending to study medicine, take also the course in Practical Anatomy.

Text-books, &c.: Gray, Wilson, Quain, Allen's Dissector, Holdens' Manual.

Spring Term.—Physiology is studied during the Spring term, including five lectures every week. The consideration of the Physiology of each organ will be preceded by lectures on its minute anatomy. The study of this branch will be facilitated by diagrams and charts and the use of the microscope, and by experiments upon inferior animals. Instruction in the Practical Analysis of Urine, and in the mi-

croscopical examination of urinary deposits and the different fluids of the body will be given in the course. Hygiene will be considered in connection with Physiology.

Text-books and books of reference: Flint's Human Physiology, Yoe's Manual, Kirk, Dalton, Carpenter, Foster.

In Hygiene, Parke's, Huxley and Youman, Wilson.

Mathematics.

E. S. AVIS, 1ST LIEUT., 25th U. S. INFANTRY.

The course of instruction consists of two years.

JUNIOR YEAR.

First term.—Trigonometry.
Second and third terms.—Analytic Geometry.

SENIOR YEAR.

First and second terms.—The Calculus
Third term.—The Calculus or Determinants.

Students are required to pass an examination in University Algebra and Geometry, in order to enter the Junior year in this school.

They should be well grounded in Logarithms, in Factoring, in the Discussion of Equations, and in the Eight Roots of the Four Forms of the Quadratic Equation, $x^2 \pm 2px = \pm q$.

Bachelor of Arts Course. Weekly Schedule. First Year.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	*Physics:* Mechanics		*Physics.* Mechanics.		*Physics.* Mechanics.
	9½	*Greek,* Herodotus, Gr. Prose Comp.	*Greek.* Herodotus; Gr. Comp	*Greek.* Herodotus; Gr. Comp.	*Latin.* Virgil; Comp.	*Latin.* Virgil; Comp.
	10½	*Math.* Trigonometry.	*Math.* Trigonometry.	*Math* Trigonometry.	*Math.* Trigonometry.	
	11½		*Rhetoric.* Style, Essays.		*Rhetoric* Style Essays.	*Rhetoric.* Style, Essays.
WINTER.	8½	*Physics.* Electricity, Magnetism. Sound.		*Physics* Electricity, Magnetism. Sound.		*Physics.* Electricity, Magnetism, Sound.
	9½	*Greek:* The Iliad; Exercises.	*Greek.* The Iliad; Exercises.	*Greek:* The Iliad; Exercise; or *Latin.* Horace. Odes, Exercises	*Latin.* Horace, Odes; Exercises.	*Latin.* Horace, Odes, Exercises.
	10½	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	
	11½		*English Language.*		*English Language*	*English Language.*
SPRING.	8½	*Physics.* Heat, Light.		*Physics.* Heat, Light.		*Physics.* Heat, Light.
	9½	*Greek* The Odyssey; Exercises.	*Greek.* The Odyssey; Exercise.	*Latin.* Cicero de Senectute, &c.; Exercises	*Latin.* Cicero de Senectut, &c.; Eexrcises	*Latin.* Cicero de Senectute, &c.; Exercises
	10½	*Math* Analyt. Geom.	*Math* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	
	11½		*English Literature.*		*English Literature.*	*English Literature.*

Second Year.

ALL.	8½	*Greek.* Xenephon's Mem. Exercises.	*Greek.* Xenophon's Mem. &c.	*Latin.* Livy; Rom. Lit.	*Latin.* Livy; Rom. Lit	*Latin* Livy; Rom. Lit.
	9½	*History.* Ancient.	*Rhetoric* Invention; Essays.		*Rhetoric.* Invention; Essays.	*History.* Ancient.
	10½			*Greek.* Xenophons; Ex.		
	11½	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Field Botany.*	*Field Botany.*
WINTER.	8½	*Greek.* Plato's Apology; Exercises.	*Greek.* Plato's Apology; Exercises.	*Latin.* Horace; Satires.	*Latin.* Horace; Satires.	*Latin.* Horace; Satires.
	9½	*History.* Modern.	*Rhetoric.* Invention; Essays.		*Rhetoric* Invention; Essays.	*History.* Modern.
	10½			*Greek.* Plato's Apology.		
	11½	*Chemistry.* Inorganic.	*Chemistry* Inorganic.	*Chemistry* Inorganic.	*Field Botany*	*Field Botany.*
SPRING.	8½	*Greek.* Euripides: Exercises.	*Greek.* Euripides.	*Latin* Cicero de Officiis.	*Latin.* Cicero de Officiis.	*Latin* Cicero de Officiis.
	9½	*History.* United States.	*Rhetoric.* Invention; Essays,		*Rhetoric.* Invention; Essays.	*History.* United States.
	10½			*Greek,* Euripides.		
	11½				*Field Botany.*	*Field Botany.*

Bachelor of Arts Course. Weekly Schedule. Third Year.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESD Y.	THURSDAY.	FRIDAY.
FALL	8½	*Psychology & Logic.*	*Geology.* Dynam. & Hist.	*Psychology & Logic.*	*Geology.* Dynam & Hist.	*Psychology & Logic.*
	9½	*Zoology.*		*Zoology.*		*Zoology.*
AND	10½		*Eng Lit* Special selections.		*Eng Lit.* Selections.	
WINTER.	11½	**Latin*: Jacitus; or **German*: Grammar and Reader.	**Latin.* Tacitus; or **German.* Grammar and Reader.	**German.* Grammar and Reader	**Greek.* Demos. & Soph. **German.* Grammar and Reader.	**Greek* Demos.&Soph.;or **German.* Grmmar and Reader.
	8½	*Ethics.*		*Ethics.*		*Ethics.*
SPRING.	9½	*Polit. Economy*: Elements		*Polit. Economy;* Elements		*Polit. Economy:* Elements
	10½		*Eng. Lit.* Selections.		*Eng. Lit.* Selections.	
	11½	**Latin.* Juvenal; or **German.* Grammar and Reader.	**Latin* Juvenal; or **German.* Grammar and Reader.	**German.* Grammar and Reader	**Greek* Thucydides; or **German.* Grammar and Reader.	**Greek.* Thucydides; or **German.* Grammar and Reader.

*These subjects are elective. The student may select German or French instead of Latin and Greek.

Fourth Year.

FALL,	8½	*German.* Selections.	*Polit. Economy.* Adv'c'd *Agriculture;* (F. & W.) *Historical Psychology.*	**German.* Selections.	*Polit. Economy.* Adv'ed. *Agriculture* (F. & W.) *Historical Psychology.*	*German.* Selections.
WINTER,	9½	*French* Gram. & Reader.	*French.* Gram. & Read'n *Political Science.*	*French* Gram. & Reader	*French* Gram. & Read'r *Political Science.*	*French.* Gram. & Reader
AND	10½	*Anatomy, human, Inter. & Const Law.*	ANAT. PHYS. & HYGIENE *Science of Religion.*	*Anatomy, human. Inter & Const. Law.*	ANAT. PHYS & HYGIENE *Science of Religion.*	*Anatomy, human.*
SPRING	11½	METAPHYSICS.	*Physical Geography.*	METAPHYSICS.	*Physical Geography.*	METAPHYSICS.
	3		*Practical Physics. Microscopy.*	*Anglo Saxon.*	*Practical Physics. Microscopy.*	*Anglo Saxon.*

NOTE.—In the fourth year schedule required studies are printed in SMALL CAPS. From the other subjects printed in *italics*, the student is required to select 10 hours' of elective work per week, throughout the year.

Bachelor of Science Course. Weekly Schedule. First Year.

TERMS.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	*Physics* Mechanics.		*Physics:* Mechanics.		*Physics:* Mechanics.
	9½	*French:* Gram. & Reader.	*French:* Gram & Reader.	*French:* Gram & Reader.	*French:* Gram & Reader.	*French:* Gram. & Reader.
	10½	*Mathematics:* Trigonom.	*Mathematics:* Trigonom.	*Mathematics:* Trigonom.	*Mathematics:* Trigonom.	
	11½		*Rhetoric:* Style, Essays.		*Rhetoric:* Style, Essays	*Rhetoric:* Style, Essays.
WINTER.	8½	*Physics:* Electricity, Magnetism, Sound.		*Physics:* Electricity, Magnetism, Sound.		*Physics:* Electricity, Magnetism, Sound.
	9½	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram & Reader	*French:* Gram. & Reader.	*French:* Gram. & Reader.
	10½	*Mathematics:* Analytical Geometry.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	
			English Language.		*English Language.*	*English Language.*
SPRING.	8½	*Physics:* Heat, Light.		*Physics:* Heat, Light.		*Physics:* Heat, Light.
	9½	*French:* Gram & Reader	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram & Reader.	*French:* Gram. & Reader.
	10¼	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	
			English Literature.		*English Literature.*	*English Literature*

Second Year.

FALL.	8½	*Mathematics:* Calculus.		*Mathematics:* Calculus.		*Mathematics:* Calculus.
	9½	*History:* Ancient.				*History:* Ancient.
	10½		*Rhetoric:* Invention, Essays.		*Rhetoric:* Invention, Essays.	
			French: Selections.	*French:* Selections.	*French:* Selections.	
	11½	*Chemtstry:* Inorganic.	*Chemistry:* Inorganic.	*Chemistry:* Inorganic.	*Field Botany.*	*Field Botany.*
WINTER.	8½	*Mathematics:* Calculus.		*Mathematics:* Calculus.		*Mathematics:* Calculus.
	9½	*History:* Modern.				*History:* Modern.
	10½		*Rhetoric:* Invention, Essays.		*Rhetoric:* Invention, Essays.	
			French: Selections.	*French:* Selections.	*French:* Selections.	
	11½	*Chemistry:* Inorganic.	*Chemistry:* Inorganic.	*Chemistry:* Inorganic.	*Field Botany.*	*Field Botany.*
SPRING.	8½	*Mathematics:* Calculus		*Mathematics:* Calculus.		*Mathematics:* Calculus.
	9½	*History:* United States.				*History:* United States.
			Rhetoric: Invention, Essays.		*Rhetoric:* Invention, Essays	
	10½		*French:* Selections.	*French:* Selections.	*French:* Selections.	
	11½	*Chemistry:* Organic.	*Chemistry:* Organic.	*Chemistry:* Organic.	*Field Botany*	*Field Botany.*

TERMS.	HOUR	MONDAY.	TUESDAY.	WEDNE-DAY.	THURSDAY.	FRIDAY.
FALL	8½	*Psychology and Logic.*	*Geology:* Dynam. & His.	*Psychology and Logic.*	*Geology:* Dynam. & His.	*Psychology and Logic.*
AND	9½	*Zoology.*	*Structural Botany.*	*Zoology.*	*Structural Botany.*	*Zoology.*
WINTER.	11½	*German:* Gram. & Read.	*German:* Gram & Read.	*German:* Gram. & Read.	*German:* Gram & Read.	*German:* Gram. & Read.
	8½	*Ethics.*	*Mineralogy.*	*Ethics.*	*Mineralogy.*	*Ethics.*
SPRING.	9½	*Polit. Economy:* Elem'ts.		*Polit. Economy:* Elem'ts.		*Polit. Economy:* Elem'ts.
	11½	*German:* Gram. & Read	*German:* Gram. & Read.	*German:* Gram. & Read	*German:* Gram. & Read.	*German:* Gram. & Read.

Fourth Year.

	8½	*German:* Selections.	Political Economy: Advanced Agriculture. Historical Psychology	*German:* Selections.	Political Economy: Advanced. Agriculture. Historical Psychology	*German:* Selections.
FALL, WINTER	9½	Analytical Chemistry.	Analytical Chemistry. Political Science.	Analytical Chemistry.	Analytical Chemistry. Political Science	Analytical Chemistry.
AND	10½	Anatomy, Human. Inter. and Const. Law.	*Anatomy, Physiology and Hygiene.*	Anatomy, Human. Inter. and Const. Law.	*Anatomy, Physiology and Hygiene.*	Anatomy, Human. Inter. and Const. Law.
SPRING.	11½	*Metaphysics.*	Science of Religion. Physical Geography. (S.)	*Metaphysics.*	Science of Religion Physical Geography. (S.)	*Metaphysics.*
	3		Practical Physics. Microscopy.	Anglo-Saxon	Rractical Physics. Microscopy.	nglo-Saxon.

NOTE—In the Fourth Year Schedule, required studies are printed in *ITALICS.* From the other subjects, printed Student is required to select seven hours of elective work throughout the Year.

DEPARTMENT OF CIVIL ENGINEERING.

Faculty.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric.

P. B. REYNOLDS, D. D.,
Professor of Psychology and Logic.

JOHN I. HARVEY, PH. D.,
Professor of French.

I. C. WHITE, PH. D.,
Professor of Geology.

A. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics.

E. S. AVIS, PH. D.,
Professor of Mathematics.

T. M. JACKSON, C. E.,
Professor of Civil Engineering.

JOHN L. JOHNSTON, C. E.,
Assistant in Engineering.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.,
Assistant in English.

Course of Study in Civil and Mining Engineering.

This department was established in 1888. Its object is to furnish along with other necessary studies, a thorough and complete course of training and practical work for the profession of engineering.

To enter this course of study, the student, if intending to apply for the degree of Bachelor of Civil Engineering must have completed the course of study of the Preparatory Department of the University or its equivalent except Greek.

The course of study for the degree of Bachelor of Civil Engineering is distributed over a term of four years, and includes the following subjects in the collegiate department, in addition to the engineering studies proper; Pure Mathematics, Physics, General Chemistry, Dynamical and Stratigraphical Geology and Mineralogy, French, Rhetoric, Psychology and Logic, Junior English and Drawing.

Course of Study for the Degree of Bachelor of Civil Engineering.

Note.—To enter this course the student must have completed the course of study in the Preparatory Department or its equivalent, except Greek.

FIRST YEAR.

Physics, Junior French; Trigonometry, Analytical Geometry, Junior English and Drawing.

SECOND YEAR.

Analytical Geometry, Calculus, Senior French, Geology, General Chemistry, Land Surveying, Theory of Roads and Railroads, Construction, &c.

THIRD YEAR.

Psychology and Logic, Mineralogy, Analytical and Applied Mechanics, Railroad Location, Stereotomy, Topography, Architecture, Mining, &c.

FOURTH YEAR.

Bridges and Graphics, Hydraulics and Sanitation Railroad Economy, Contracts and Reports, Plans, Specifications, Field Practice.

A written thesis will be required in the fourth year, of all candidates for the degree of Bachelor of Civil Engineering.

Course of Instruction in the Study of Civil Engineering.

Prof. Jackson: Mr. Johnston.

The course in Engineering proper will cover the last three years and be distributed as follows:—

SECOND YEAR.

First Term—Land Surveying (Gillespie).
Second Term—Roads and Railroads (Gillespie).
Third Term—Leveling, Road and Railroad Construction.

THIRD YEAR.

First Term—Analytical and Applied Mechanics (Wood), Topography (Smith), Architecture (Weale).
Second Term—Applied Mechanics (Merriman), Descriptive Geometry (Faunce), Civil Engineering (Mahan).
Third Term—R. R. Location (Searles), Stereotomy (Warren).

FOURTH YEAR.

First Term—Bridges and Graphics (Merriman), Mining, General Engineering, Original Work.

Second Term—Hydraulics and Sanitation (Merriman), R. R. Economy (Wellington), Plans, Specifications, &c.

Third Term—Field Practice and Original Work.

Details of Course of Instruction in Engineering.

FIRST YEAR.

The studies of this year are confined to the Collegiate Department, and are substantially the same as for the first year in the Bachelor of Science course, except that a complete course in free hand, map and color drawing, is given by Mr. Johnston.

SECOND YEAR.

Surveying—In surveying the student will be given a complete course, both in the theory and practice. He will make his own surveys in the field, and necessary calculations. Each student must make an individual survey, lay off and divide up land, retrace old lines, &c., and do all that a county surveyor would be called upon to perform.

Roads and Railroads.—The theory of location, construction and maintainance of common roads, streets and railroads; the economy of location; grades, &c.

Leveling and Construction.—The construction of roads and railroads, vertical surveying, calculating quantities in earthwork, mechanical structures, the profile and estimates.—MR. JOHNSTON.

THIRD YEAR.

Mechanics.—A complete course in analytical and applied mechanics and strength of material, illustrated in actual tests in tensile, compressive and transverse strength.

Railroad Location.—All the details in the location of Railroads, curves, curve surveying, &c. Actual lines will be run, and each step in the survey studied, the reconnoissance, the preliminary line, the final location, the profile, grades, &c., staking out and estimate. Coal mining and the construction of mining plants, coke ovens, &c.—MR. JOHNSTON.

Stereotomy.—This subject will include masonry constructions, foundations, limes, cement, &c.—Mr. JOHNSTON.

Engineering.—Mechanical structures, pile construction, canal, river and harbor improvement—general engineering. During this year, the student will be required to construct topographical maps and contours, to locate railroads from contours, and field work in all branches covered up to date; also the study of architectural styles.—MR. JOHNSTON.

FOURTH YEAR.

Students who are candidates for the degree of B. E. are required to devote this year exclusively to engineering studies. The work during the year will include the theory of roofs and bridges. The working out of actual bridge practice, the designing of bridges and roofs and calculation of strains, Practical Hydraulics, the designing of Water Works, Sewerage Systems, &c., general field practice in Engineering, Contracts, Reports, Plans, Specifications, &c. The class will visit engineering works in progress, and make reports upon the same; will visit mines and report upon the methods of working; design original work in engineering structure, with the study and effect of contracts,

and make reports on new engineering works and projects.—PROF. JACKSON.

NOTE.—A satisfactory written thesis will be required in the fourth year of all candidates for the degree of B. E.

As many young men who enter college are prevented from completing the course and taking a degree, it is intended in the course of engineering, to make practical application of theory as the course proceeds. Thus it is expected that a student who can take only the first year of the engineering course proper, will be a thorough master of the practical details of surveying, able to do any of the work required of an official county surveyor, such as identifying lines, mapping and locating surveys from papers, preparing jury maps in legal controversies concerning land; in short, thoroughly qualified as a practical surveyor.

At the end of the second year of the engineering course proper, the student is expected to be able to act as "Instrument man" on an engineering corps. And so, throughout the entire course, such practical work is given in the applications of engineering theory as will enable the student to begin his work fully equipped with the fundamental practice of his profession.

Students who do not expect to apply for a degree may take such studies in the school of engineering as they may be prepared for, as far as the arranged schedule of recitations may permit.

To facilitate instruction in this department the University has provided a large collection of field and other instruments. The field instruments consist of a Compass, Wye Level, (Buff & Beyer), Plain Transit, (Keuffel & Esser), complete Transit, (Buff & Byer), a Sextant, and a large supply of rods, level rods, chains, tapes and other accessories. Also all the hand and pocket instruments used in surveying, as Aneroid Barometers, Clinometers, Odemeters, Field Glasses, Pedometers, Telemeter, Solar Attachments, Prismatic Compass, Hand levels (Locke & Abney's). The Department is also supplied with a *Riehle Brothers'* Testing Machine, with a capacity of 40,000 pounds, for testing tensile, compression and transverse strains; a complete set of U. S. Standard Weights and Measures; a full outfit of Drawing Instruments, including papers, &c.; a Blue Printing outfit, which process is made familiar to students; a fine selection of all the instruments used in office work, including fine Protractors, Trigonometer, and Engineer's Slide Rule. Students have every opportunity and are encouraged to familiarize themselves with the use of instruments.

Engineering Society.

Engineering students are expected to join the "Engineering Society." Its purpose is to discuss engineering subjects. Great benefit has already resulted from the organization. Students in engineering also usually join one of the Literary Societies of the University.

Bachelor of Civil Engineering Course Schedule of Recitations.

TERM	Hour	FIRST YEAR	SECOND YEAR	THIRD YEAR.	FOURTH YEAR.
FALL TERM.	8½	Physics, M, W, Fr.	Dynamical Geology, T, Th. Calculus, M, W, Fr.	Mining Engineering, T, Th. Psychology, M, W, Fr.	Bridges and Graphics, M, T, W, Th. Fr,
	9½	French, M, T, W. Th, Fr	Surveying, M, T, W, Th.		
	10½	Trigonometry, M, T, W, Th	French, T, W, Th.	Mechanics M, T, W, Th, Fr.	Contracts and Reports, T, Th
	11½	Rhetoric, T, Th, Fr	Chemistry, M, T, W.	Topography & Achitecture, M, W, Fr.	Field Practice.
	3	Drawing, T, Th	Field Practice, Fr and Sat.		Field Practice.
WINTER TERM.	8½	Physics, M, W. Fr.	Calculus, M, W, Fr.	Mining Engineering, T, Th. Psychology and Logic, M, W, Fr.	Hydraulics and Sanitation, M, T, W, Th. Fr.
	9½	French, M, T, W, Th, Fr.	Roads and Railroads, M, T, W, Th.	Descript. Geom., T, Th.	Plans, Specifications, T, Th.
	10½	Analyt. Geom., M, T, W, Th	Stratigraph. Geology, M, Fr. French, T, W, Th	Railroad Curves, T, Th. Strength of Materials, M, W, Fr.	Railroad Economics, M, W, Fr.
	11½	Eng Language, T, Th, Fr.	Chemistry, M, T, W.	Engineering, M, W, Fr.	Original Work.
	3	Drawing, T, Th.	Field Practice, Fr and Sat.		Original Work.
SPRING TERM.	8½	Physics, M, W, Fr.	Calculus, M, W, Fr.	Mineralogy, T, Th. Ethics, M, W, Fr.	
	9½	French, M, T, W, Th, Fr.	Leveling & R. R. Constr'n, M, T, W, Th		Field Practice during the Spring Term, Original Work and Lectures.
	10½	Analyt. Geom., M, T, W, Th	Stratigraphical Geology, M, Fr. French, T, W. Th.	Railroad Location, M, T, W, Th, Fr.	
	11½	English Lit., T, Th, Fr.	Chemistry, M, T, W.	Stereotomy, M, W, Fr.	
	3	Drawing, T, Th.	Field Practice, Fr and Sat.		

THE MILITARY DEPARTMENT.

Faculty and Instructors.

E. M. TURNER, LL. D.,
President.

E. S. AVIS, 1st Lieut. 25th Infantry, U. S. A.
Professor of Military Science and Tactics.

CAPTAIN F. G. ROSS,
CAPTAIN T. D. LYNCH,
CAPTAIN M. D. POST,
Instructors in Tactics.

1st LIEUT. AND ADJUTANT, J. W. FRANCIS,
Instructor in Bayonet and Saber Exercises, and in Infantry Drill.

1st LIEUT. C. C. COFFMAN,
Instructor in Infantry Drill.

SERGEANT-MAJOR J. A. GRIER,
1st SERGEANT G. M. ALEXANDER,
Assistant Instructors in Infantry Drill.

QUARTERMASTER-SERGEANT J. R. TROTTER,
Instructor in Target Drill and in Artillery Drill.

COLOR-SERGEANT C. W. GORE,
Assistant Instructor in Bayonet and Saber Exercises.

SERGEANT G. M. FORD,
Instructor in Signalling.

SERGEANT C. E. VANCE,
SERGEANT J. T. HOLBERT,
Assistant Instructors in Target Drill and in Artillery Drill.

CORPORAL G. E. SINGLETON,
COLOR-CORPORAL K. WHITE,
Assistant Instructors in Bayonet and Saber Exercises.

SIGNAL-CORPORAL W. A. BURDETTE,
Assistant Instructor in Signalling.

1st LIEUT. AND ADJUTANT J. W. FRANCIS,
2nd LIEUT. A. B. COOPER,
SERGEANT-MAJOR J. A. GRIER,
QUARTERMASTER-SERGEANT J. R. TROTTER,
COLOR-SERGEANT C. W. GORE,
SERGEANT J. T. HOLBERT,
SERGEANT A. K. MARTIN,
CORPORAL E. T. HARTMAN,
CORPORAL M. BABB,
Instructors of New Cadets.

COURSE OF INSTRUCTION IN THE MILITARY DEPARTMENT.

APPOINTMENT OF CADETS.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The commandant of cadets, or the President, will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts—the names of the Regents are prefixed to this catalogue:

District I. Hancock, Brooke, Ohio.
District II. Marshall, Wetzel, Marion.
District III. Ritchie, Doddridge, Harrison, Tyler.
District IV. Pleasants, Wood, Wirt, Gilmer, Calhoun.
District V. Mason, Jackson, Roane.
District VI. Putnam, Cabell, Wayne.
District VII. Lincoln, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers. Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Boone.
District X. Lewis, Randolph, Upshur, Barbour, Webster.
District XI. Preston, Monongalia, Taylor.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton, Tucker.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause.

UNIFORM.

A neat uniform of cadet gray is worn. The cap, trousers and blouse, or drill coat, constitute the uniform. Cadets will keep this in view when joining. Insignia of rank are worn on the blouse, and

on the dress coat; straw hats can be worn in summer, when not on military duty.

Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term.

The University has an ample equipment for both infantry and artillery and is supplied with ammunition by the Ordnance Department U. S. Army.

RESIGNATION AND DISCHARGE.

Cadets who do not expect to return to the corps in September, should send their resignations to the Commandant or to the President about August 15th. Those who do not intend to return and fail to send this notice, prevent some one from obtaining an appointment. It is but justice to others that their intention to stay away should be known as soon as possible.

Cadets, who, expecting to return, find themselves unable to report on the first day of the Fall term, should state their seasons in writing to the Commandant or to the President before the first day of the term, and ask for leave of absence to cover the time they will be necessarily absent.

All cadets who fail to report on the first day of the Fall term, and who have not obtained leave of absence, will be discharged and the Regent notified of the vacancy.

PRACTICAL AND THEORETICAL INSTRUCTION.

The annual course in drill for the corps, is as follows:

Fall term—Instruction of New Cadets, Company and Battalion Drill, Bayonet Exercise, etc. All officers exercise command and are inspected as in the Regular Army.

Winter term—Target Drill, Bayonet Exercise, Sabre Exercise, Manual, Setting Up, School of the Soldier, Recitations and Lectures, Signaling.

Spring Term.—Company and Battalion Drill, Artillery Drill, Sabre Exercise, Signaling, Target Practice, etc. Captains and members of the graduating class will command the battalion and be inspected.

Inspection will take place every Monday during the year. Dress Parades, Reviews and Guard-Mountings will take place from time to time.

Recitations for the non-commissioned officers will be held by the Captains under the general supervision of the Commandant.

Lectures will be upon the following subjects:

Arms and Ammunition; Tactical and Administrative Units; Ground and Outposts; Outposts and Patrols; Reconnoitering; Marching; Advanced and Rear, and Flank Guards; Tactical Use of Infantry; Tactical Use of Cavalry; Tactical Use of Artillery; Tactics of the Three Arms Combined; Attack and Defense; Operations by Night; Rivers; Defiles; Villages; Woods; Convoys; Field-Works; Strategy; Customs of the Service; Official Papers, etc.

The officers and non-commissioned officers are required to exercise the command and to perform the duties of their offices as in the Regular Army. It is believed that such training will improve the young men physically and prepare them to be of great use to their country in case of need.

In the report of The Inspector-General of the Army, for the year 1890, Capt. W. F. Reynolds, and 2nd Lieut. J. W. Francis are complimented, by the officers who inspected this College, for the manner in which they executed movements under his inspection.

BATTALION ORGANIZATION.

COMMANDANT OF CADETS.

E. S. Avis, 1st Lieut. 25th U. S. Infantry.

SURGEON.

J. W. Hartigan, Professor.

BATTALION STAFF.

Francis, J. W., (1) 1st Lieut. and Adjutant.

NON-COMMISSIONED STAFF.

Grier, J. A., Sergeant-Major.
Trotter, J. R. Quartermaster-Sergeant.

COLOR-GUARD.

Gore, C. W., (1) Color-Sergeant.
Thayer, A. L., (2) Color-Corporal.
Garlow, E. C. (3) Color-Corporal.
White, K., (10) Color-Corporal.

BAND.

Burley, J. L.....1st Bb Clarinet.
Carrigan, C. E.....Solo Alto.
Conn, G. H. .....1st Eb Cornet.
Ellis, J. R.....Solo Bb Cornet.
Greynolds, L..... .....2nd Eb Alto.
Hartley, A. C .....1st Bb Tenor.
Hogg, G.....2nd Bb Cornet.
Kinkaid, D. B .....1st Bb Cornet.
Leonard, W. C.....Snare Drum.
McEldowney, S. B .....Tuba.
McWhorter, J. C.....Piccolo.
Minshall, F. M.....Bb Baritone.
Moore, J. M.....Cymbals.
Oesterling, H. E.....Bass Drum.
Sisler, M. T .....2nd Bb Tenor.

Company A.	Company B.	Company C.
	Captains:	
Ross, F. G. (1)	Lynch, T. D. (2)	Post, M. D. (6)
	First Lieutenants:	
Hayes, U. S. G. (2)	Duvall, C. R. (3)	Coffman, C. C. (4)
	Second Lieutenants:	
Lemley, C. McC. (1)	Cooper, A. B. (3)	Sisler, C. B. (2)
	First Sergeants:	
Meyer, W. C. (1)	Alexander, G. M. (2)	Smith, A. B. (3)
	Sergeants:	
Ford, G. M. (2)	Holbert, J. T. (5)	Vance, C. E. (4)
Smith, H. W. (3)	Martin, A. K. (7)	Ramsey, R. H. (6)
	Corporals:	
Hartman, E. T. (4)	Paul, J. W. (1)	Babb, M. (5)
Wiles, J. W. (6)	Singleton, G. E. (7)	Jaco, L. M. (8)
Morris, C. E. (9)	Bennett, C. M. (11)	Burdette, W A. (12) [Sig'l]
Minshall, F. M. (15)	Vance, J. C. (13)	Rogers, W. D. N. (14)

GENERAL ROSTER OF STATE CADETS.

Those marked (g) belong to the graduating class.
*County to which accredited.

DISTRICT I.—*J. B. Somerville, Regent.*

	Name.	*County.*	*When Enlisted.*	*Company.*
1	Meyer, W. C.	Ohio	Aug. 31, 1887	A
2	Morris, C. E.	Ohio	Sept. 4, 1889	A
3	Martin, A. K.	Barbour *Brooke	Feb. 22, 1890	B
4	Bambrick, G. L.	Hancock	Sept. 10, 1890	B
5	Downing, T. F.	Ohio	Sept. 10, 1890	C
6				
7				
8				

LOSS.

1 Cox, F. C., resigned September 10, 1890.
2 Garvin, C. E., resigned January 7, 1891.
3 McCoy, G. L., resigned March 23, 1891.

DISTRICT II.—*Clarence L. Smith, Regent.*

1	Francis, J. W.	Marshall	Nov. 13, 1886	Staff
2	Lemley, C. Mc., (g)	Wetzel	March 9, 1887	A
3	Holoert, J. T.	Marion	Sept. 4, 1888	B
4	White, K.	Marshall	Dec. 2, 1888	C
5	Carrigan, C. E.	Marshall	Sept. 4, 1889	B
6	Thomas W. M.	Marion	March 11, 1890	C
7	Bennett, C. J. C.	Marion	Sept. 10, 1890	A
8	Krebs. C. E.	Wetzel	Sept. 10, 1890	A

LOSS.

1 Clark, F. W., graduated June 11, 1890.

DISTRICT III.—*Peregrin Hays, Regent.*

1	Post, M. D., (g)	Harrison	Sept. 1, 1886	C
2	Lynch, T. D., (g)	Harrison	Sept. 10, 1886	B
3	Coffmann, C. C.	Harrison	Oct. 18, 1887	C
4	Hughes, J. W.	Gilmer	Sept. 10, 1890	A
5	Pearcy, C. S.	Gilmer	Sept. 10, 1890	C
6	Hood, C. P.	Harrison	Jan. 26, 1891	B
7				
8				

LOSS.

1 Brannon, H., resigned January 7, 1891.
2 Davis, J. H., discharged November 1, 1890.
3 Jackson, J. M. resigned September 10, 1890.
4 Lynch, W. E., resigned January 28, 1891.
5 Smith, E. G., resigned September 10, 1890.
6 Wallis, E. S., discharged September 10, 1890.

DISTRICT IV.—*D. D. Johnson, Regent.*

1	Smith, H. W.	Tyler	Sept.	1, 1886	A
2	Grier, J. A	Wood	March	15, 1887	Staff
3	Cooper, A. B. (g)	Wood	Jan.	24, 1888	B
4	Barnett, O.	Wood	Sept.	10, 1890	A
5	Leonard, W. C.	Wood	Sept.	10, 1890	C
6	Steed, H. A.	Wirt	Sept.	10, 1890	B
7					
8					

LOSS.

1 Pierpoint, P. L., discharged November 1, 1890.
2 Steele, G., resigned September 10, 1890.

DISTRICT V.—*John G. Schilling, Regent.*

1	Gore, C. W.	Harrison *Mason	Sept.	19, 1888	C
2	Ramsay, R. H.	Harrison *Jackson	October	12, 1888	C
3	Vance, C. E	Harrison *Roane	March	27, 1889	C
4	Moore, J. M.	Mason	October	23, 1889	B
5	Nuzum, J	Jackson	March	11, 1890	A
6	Chambers, B. W.	Roane	April	7, 1891	not assigned
7	Chambers, A. J	Roane	April	7, 1891	" "
8	Simmons H. J	Roane	April	9, 1891	" "

LOSS:

1. Clark, J. B., resigned September 15, 1890.

DISTRICT VI.—*E. A. Bennett, Regent:*

1	Burdette, W. A	Cabell	Nov.	26, 1888	C
2	Dudding, J.	Putnam	Sept.	10, 1890	C
3	Johnson, T. C.	Tyler *Cabell	Sept.	10, 1890	B
4	Peters, S. V	Wayne	Sept.	10, 1890	A
5	Duncan, H. C.	Wayne	Jan.	14, 1891	C
6					
7					
8					

LOSS.

1 Alexander, A. S., discharged September 10, 1890.
2 Lewis, W, H., resigned March 27, 1891.
3 McCoy, E. D., resigned April 8, 1891.
4 McMillen, H. C., resigned February 17, 1891.
5 Thomas, W. J., resigned June 1, 1890.
6 Vinson, L. B., Resigned January 21, 1891.
7 Wilson, W. L., resigned January 21, 1891.

DISTRICT VII.—*W. A. French, Regent.*

1	Jaco, L. M.	Monongalia *Boone	Oct.	5, 1887	C
2	Bennett, C. M.	Gilmer *Raleigh	Sept.	4, 1889	B
3	Paul, J. W.	Preston *Mercer	Jan.	22, 1888	B
4	Herndon, I. C.	Mercer	Sept.	12, 1890	B
5					
6					
7					
8					

LOSS.

1. Pierce, W., resigned September 15, 1890.

DISTRICT VIII.—*M. J. Kester, Regent.*

1	Ford, G. M	Monongalia *Monroe	Jan.	30, 1888	A
2	Vance, J. C.	Harrison *Greenbrier	Sept.	4, 1889	B
3	Hogg, G.	Mason *Fayette	Sept.	4, 1889	B
4	Hartley, A. C.	Preston *Pocahontas	Sept.	10, 1890	A
5	Jones, C. R.	Taylor *Summers	Sept.	10, 1890	C
6	McEldowney, S. B.	Wetzel *Summers	Sept.	10, 1890	B
7					
8					

LOSS.

1 Beard, H. L., resigned May 1, 1890.
2 Keadle, R. L., discharged September 10, 1890.
3 Leach, E., resigned May 1, 1890.

DISTRICT IX—*J. F. Brown, Regent.*

1	Trotter, J. R. (g)	Preston *Clay	October	8, 1887	Staff
2	Singleton, G. E.	Braxton	Sept'r	4, 1888	B
3	Allen, W.	Kanawha	Sept'r	10, 1890	B
4	Kinkaid, D. B.	Taylor *Nicholas	Sept'r	22, 1890	C
5					
6					
7					
8					

LOSS.

1 Reynolds, F. C., graduated June 11, 1890.
2 Calvert, W. J., resigned September 12, 1890.
3 Cunningham, J. B., resigned September 10, 1890.

DISTRICT X.—*Thomas J. Farnsworth, Regent.*

1	Hayes, U. S. G. (g)	Barbour	Sept. 1, 1885	A
2	Thayer, A. L.	Taylor	Sept. 4, 1888	C
3	Edmiston, M. A.	Lewis	Sept. 10, 1890	C
4	Greynolds, L.	Randolph	Sept 10, 1890	C
5	Kitson, G. H.	Lewis	Sept. 10, 1890	B
6	McWhorter, J. S.	Upshur	January 7, 1891	B
7	Kunst, G. H. A	Taylor	April 14, 1891	A
8				

LOSS.

1 Brannon, E. A., resigned January 7, 1891
2 Bennett, J. B., resigned January 9, 1891.
3 McWhorter, J. S., discharged September 10, 1890.
4 Ward, T. H., discharged September 10, 1890.
5 Callihan, O. C., discharged April 8, 1891.

DISTRICT XI.—*Joseph Moreland, Regent.*

1	Alexander, G. M.	Monongalia	Sept. 1, 1886	B
2	Wiles, J. W.	Preston	Sept. 8, 1887	A
3	Garlow, E. C.	Monongalia	Nov. 4, 1887	C
4	Warman, A.	Monongalia	Sept: 4, 1889	B
5	Ellis, J. R.	Preston	Sept. 9, 1889	B
6	Hartman, E. T.	Preston	Nov. 26, 1889	A
7	Henderson, J. L.	Monongalia	Feb. 12, 1890	A
8	Ridgway, C. N	Monongalia	Sept. 10, 1890	A

LOSS.

1 Lazier, A. M., resigned September 10, 1890.

DISTRICT XII.—*John A. Robinson, Regent.*

1	Minshall, F. M.	Mineral	August 31, 1887	A
2	Babb, M.	Grant	Sept. 4, 1889	C
3	Daily, R. W.	Hampshire	Sept. 10, 1890	B
4				
5				
6				
7				
8				

LOSS.

1 Allender, C. R., discharged September 10, 1890.
2 Knight, C. R., discharged January 15, 1891.
3 McGahan, H., discharged January 14, 1891.
4 Miller, C. F., resigned January 14, 1891.
5 Reynolds, F. C., graduated June 11, 1890.

DISTRICT XIII.—*W. W. Brown, Regent.*

1	Sisler, C. B.	Monongalia	Sept. 1, 1886	C
		*Morgan		
2	Duvall, C. R. (g)	Berkeley	August 31, 1887	B
3	Davenport, B.	Jefferson	Sept. 12, 1889	A
4	Johnson, G. W.	Jefferson	Sept. 10, 1890	A
5				
6				
7				
8				

LOSS.

1 Hanshaw, J. E., discharged October 21, 1890.
2 Vickers, E. H., graduated June 11, 1890.

VOLUNTEERS.

1	Ross, F. G (g)	Dunkard, Pa.	March	8, 1887	A
2	Smith, A. B.	Fayette county Pa.	Sept'r	10, 1888	C
3	Rogers, W. D. N	Scottdale, Pa.	Sept'r	4, 1889	C
4	Oesterling, H. A	Wheeling, W. Va.	Sept'r	18, 1889	C
5	Boyd, A. E.	Uniontown, Pa.	Sept'r	10, 1890	B
6	Boyd, S. P	Uniontown, Pa.	Sept'r	10, 1890	C
7	Duvall, R. P	Jordan's Spr'gs Va.	Sept'r	10, 1890	A
8	Johnson, J. M	Long Reach, W. Va.	Sept'r	10, 1890	C
9	Link, C. W	Duffields, W. Va.	Sept'r	10, 1890	B
10	Pearcy, E.	Normant'n, W. Va.	Sept'r	10, 1890	C
11	Schoonmaker, G. F.	Uniontown, Pa.	Sept'r	10, 1890	B
12	Schoonmaker, R. D.	Uniontown, Pa.	Sept'r	10, 1890	C
13	Corpening, W. J	Bridgeport, W. Va.	Oct.	31, 1890	A
14	McWhorter, J. C.	Upshur co., W. Va.	January	7, 1891	B

LOSS.

1 Hughart, G. E., discharged September 10, 1890.
2 Knight, C. R., appointed cadet 12th, Dist., April 25, 1890.
3 Shaffer, P. A., resigned March 3, 1891.
4 Smith, E. G., resigned May 29*, 1890.
5 Smith, W. F., resigned May 29, 1890.
6 Stifel, H. G., resigned January 7, 1891.*
7 Welton, A. J., discharged December 8, 1890.
8 Willis, W., resigned January 15, 1891.
9 Kunst, G. H. A., appointed cadet 10th Dist., April 14, 1891.

THE LAW DEPARTMENT.

FACULTY.

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COURSE OF STUDY IN THE LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department. By recent act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law, Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleadings and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, 1st Greenleaf on Evidence; and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature.

The text-books will be supplemented by lectures each day, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law, as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law is the "Fœderalist." This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States, interpreting its provisions, is also the subject of lectures

The text-book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence.

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to

Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. A majority of the students do so; but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the Academic Department in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture, and preparation for the course.

The Two Years Course.

When dividing the course into two years, the first year will include Blackstone's Commentaries and the statute law of the State—lectures three times a week—together with Commercial Law three times a week in Fall and Spring terms; to which may be added, if the student is competent, Constitutional or International Law.

As one term is not much dependent upon another, as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall term if possible.

The work of the year is divided among the tree terms, as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleading. Evidence.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2d books (continued) Blackstone, 3d and 4th books (begun).	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	PROF. WILLEY.

[illegible]

Constitutional Law [illegible]
Criminal Law [illegible] Epitome
(continued)
Real Property

Bailments
Corporations
Practice [illegible]
Insurance
Equity

Methods of Instruction.

[illegible]

[illegible] and [illegible] examinations [illegible] and [illegible] for graduation a review [illegible] course. They will all be in writing.

Moot Courts.

[illegible] and with the principles and [illegible] connected, he will be more or less awkward and confused [illegible] to the Bar and attempts for the first time [illegible] application [illegible] unless he has [illegible] in his behalf [illegible] a jaded [illegible] the [illegible] prepare the students for the great [illegible] legal [illegible] of practice [illegible] and take the [illegible] to try [illegible] charge [illegible] and [illegible] to the practice of [illegible] demands. [illegible] themselves and [illegible] witnesses [illegible] officers of the court, [illegible] actual [illegible] practice, while [illegible] the foundation [illegible] the legal principles [illegible] the practice. The graduates [illegible] department of study [illegible] come under review by the [illegible] and young men are thus [illegible] to appear and conduct themselves [illegible] the Bar as gentlemen [illegible] Lawyers.

Requirements for Admission and Degree.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applies for admission intended to be a candidate for the degree of Bachelor of Laws, he must have attained such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can [illegible] enter upon the practice of Law when the legal studies are completed.

In September of each year an examination in ordinary English

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Expenses.

The tuition fee in the Law Department [illegible]

The ordinary expenses for boarding, &c., are quite [illegible] other University town in the United States.

A summary of the expenses of boarding, &c., as given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text books essential to the successful prosecution of the work of the law schools are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence (Vol. I.), Smith's Mercantile Law, Adams' Equity, The Federalist, Woolsey's Constitutional Law.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second-hand" at from $12.00 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical profession, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and he demonstrates constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good lawyer."

It is almost the universal experience that when a young man has determined to go to the bar, he becomes impatient to engage in the activities of his profession with which he is surrounded; he wants to do it rather than to take the course that

active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries.

THE PREPARATORY DEPARTMENT.

E. M. TURNER, LL. D., *President*

A. W. LORENTZ, A. M.,
Principal, and Instructor in Latin.

JAMES S. STEWART, M. S.,
Instructor in Mathematics.

A. J. HARE, A. B.,
Instructor in Latin and Greek.

E. H. VICKERS, A. B.,
Instructor in English and Mathematics.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. The Preparatory Department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity for this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the University many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Course of Study.

The course of study in the Preparatory Department aims to prepare young men for admission to the higher classes in the University.

Candidates for entrance should be at least fifteen years old and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State, including Arithmetic through common fractions; the elements of English Grammar; Geography; Orthography.

No special examination is required for entrance into the Junior class of the Preparatory school. Students are classed according to their apparent advancement, and are admitted *on trial* for the first term.

If a student fails to make a *general average* of 6 or a scale of 10 for the Fall term in the first, or Junior Year, he is not allowed to go on. For the remaining terms he is required to make an average of 7 in every study in order to be promoted at the end of the year. In the second or Senior Year each student is required to make an average of 6 *in each study* for the Fall Term. If he fails to do this, he is required

to take the junior year on that study as a regular, if it is a two year study. If it is not a two year study, he cannot be passed in that study at the end of the year. After the Fall term, each student in the Junior year must make an average of 7 each term in every study in order to be promoted at the end of the year.

The course of study in the Preparatory Department is arranged as follows:

Junior Year

FALL TERM.

Arithmetic—Greenleaf's Complete—from Common Fractions to Discount ..... 5 hours a week
English Grammar—(Swinton)—Etymology ..... 5 hours a week
Latin (commenced) ..... 5 hours a week

WINTER TERM.

Arithmetic (completed) ..... 3 hours a week
English Grammar—Syntax and English Comp. ..... 5 hours a week
Latin—Grammar and Reader—Chase & Stuart ..... 5 hours a week
Algebra—Wells' Academic—to Fractions ..... 2 hours a week

SPRING TERM.

Algebra—Wells' Academic (completed) ..... 5 hours a week
English Grammar—Anal., Pros. and English Comp. ..... 5 hours a week
Latin—Grammar and Reader ..... 5 hours a week

NOTE—Students in the Junior Year of the Preparatory are not allowed to take any other studies than the above,

The classes in the Junior Year are usually taught in two or three divisions. At the end of the Fall term the divisions are re-arranged *according to scholarship*, and those who are not proficient are required to go over the work again, or given special instruction adapted to their needs.

At the end of the Junior Year, students who are not proficient in any study, are required to take the same study the next year.

Senior Year.

FALL TERM.

Algebra—Wells' University—Fractions to Imaginary Quantities ..... 2 hours a week
Latin—two books—Latin Grammar ..... 5 hours a week
Greek—Grammar and Reader (Goodwin) ..... 5 hours a week
Geometry—Wells'—Books 1 and 2 ..... 2 hours a week
Book-keeping ..... 3 hours a week
English Composition—Williams ..... 1 hour a week
Free-hand Drawing ..... 2 hours a week

WINTER TERM.

Algebra—Imaginary Quantities to Binomial Theorem 2 hours a week
Cicero's Orations (three orations—Chase & Stuart's Grammar ..... 5 hours a week
Greek—Grammar and Reader ..... 5 hours a week
Geometry—Books 3, 4 and 5 ..... 2 hours a week
Book-keeping ..... 2 hours a week
English Composition, etc. ..... 1 hour a week
Free-hand Drawing ..... 2 hours a week

THIRD TERM.

Book-keeping	3 hours a week
Algebra (completed)	2 hours a week
Geometry (completed)	2 hours a week
Virgil—Two Books of Æneid; Latin Grammar	5 hours a week
Xenophon's Anabasis (two books), Greek Grammar	5 hours a week
English Composition, &c	1 hour a week
Drawing	2 hours a week

NOTE.—Candidates for the degree of Bachelor of Sciences are not required to take Greek. Candidates for the degree of Bachelor of Arts are not repuired to take Book-Keeping.

Normal School Certificates.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

Approved High Schools.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who will go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The ex-

penses of the committee will be paid, one-half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of ten.

5th. The Faculty reserve the right to withdraw such approval, if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who, having been found deficient after their admission, cannot pass a fair test examination in the prescribed courses of preparatory studies.

6th. At the expiration of the term of four years, the approval may be renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsley Institute, Wheeling; Parkersburg High School (except Greek); Western Pennsylvania Classical and Scientific Institute, Mt. Pleasant, Pa.; Normal and Classical Academy, Buckhannon, W. Va.; Greenbrier Academy, Alderson, W. Va.; Morgantown High School (except Greek); Charleston High School (except Greek.)

NOTE.—In several of these schools Greek is not taught.

Schedule of Recitations—Preparatory Department.

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.
MONDAY.	Senior Latin I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law, Arithmetic II. English Grammar I.	Senior Latin II. Junior Latin II. English Grammar II.	Preparatory English. Junior Latin III. Arithmetic III.
TUESDAY.	Senior Latin I. Senior Algebra I. Junior Latin I. Arithmetic I.	Greek. Arithmet'c II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
WEDNESDAY.	Senior Latin I. Geometry I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law, Arithmetic II. English Grammar I.	Senior Latin II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.
THURSDAY.	Senior Latin I. Senior Algebra I. Junior Latin. Arithmetic.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algrebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
FRIDAY.	Senior Latin I. Geometry I. Junior Latin. Arithmetic.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I.	Senior Latin II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.

CATALOGUE OF STUDENTS.

Alexander, George Milton.....Morgantown.....Coll., Law
Allen, Robert E. Lee.....Lima, Tyler co..... Prep. & Coll
Allen, William Henry.....Coal Valley, Fayette co.....Prep
Babb, Maeker.....Medley, Grant co.....Prep. & Coll
Bailey, Benjamin Franklin.....Tyrconnell, Taylor co.....Law
Bambrick, George Loren.....New Cumberland, Hancock co.....Prep
Barracklow, Henry Waters.....Dunbar, Pa.....Prep
Barnett, Oscar William.....Lockhart's Run, Wood co.....Prep
Bennett, Charles J. C.....Fairmont.....Coll
Bennett, Cary M.....Bennett, Gilmer co.....Prep. & Coll
Bennett, John Brannon.....Weston, Lewis co.....Prep
Boggess, Squire Early.....Spencer, Roane co.....Law
Boyd, Alpheus Edward.....Uniontown, Pa.....Prep
Boyd, Samuel Patterson.....Uniontown, Pa.....Prep
Brannon, Edward A.....Weston, Lewis co.....Coll
Brannon, Henry.....Weston, Lewis co.....Prep
Brannon, Lynn.....Glenville, Gilmer co.....Law
Brown, James E.....Morgantown.....Law
Brown, Milton Harvey..... Halleck.....Coll
Burdett, William Alexander...Ona, Cabell co.....Coll
Burley, James Lindsey.....Moundsville, Marshall co.....Engin
Callahan, Otho.....St. George, Tucker co.....Prep
Camden, Wilson Lee.....Fairmont, Marion co.....Law
Carney, John Joseph.....Jacksonville, Lewis co.....Prep. & Coll
Carrigan, Charles Edgar.....Sherrard, Marshall co.....Prep
Casselberry, John.....Morgantown.....Prep
Chambers, Bailey Wilson.....Walnut Grove, Roane co.....Prep
Chambers, Okey Johnson. .....Walnut Grove, Roane co..... ...Prep
Clark, Frank Wells .....New Martinsville, Wetzel co.....Law
Cobun, Lincoln Jacob.....Masontown, Preston co.... .....Law
Coffman, Carroll Clair.....Bridgeport, Harrison co.....Engin
Collier, James Fuller.....Fairchance, Pa.....Prep
Collins, James Higbee.....Uniontown, Pa.....Prep
Conn, George Hunter.....Point Marion, Pa.....Prep
Cooper, Arthur Benjamin.....Parkersburg.....Coll
Corbin, James Madison..... ....Highland, Ritchie county.....Prep
Corpenning, Wilson Joseph.....Bridgeport, Harrison co.....Prep
Crockard, Frank Hearne.....Benwood, Marshall co.....Engin
Cummings, Thomas Ignatius...Camden, Lewis co.....Law
Dailey, Reginald Watson.....Springfield, Hampshire co.....Prep
Davis, Henry Garaway, Jr.....Deer Park, Md.....Prep & Coll
Davis, James Ewing.....Mourville, Monongalia co..Prep & Coll
Davenport, Braxton.....Charlestown, Jefferson co.....Coll
Dawson, James Evans.....Uniontown, Pa.....Law
Dille, Thomas Reay.....Morgantown.....Prep
Deahl, Jasper Newton.....Preston co.....Coll
Dorsey, George Frederick.....Morgantown.....Prep & Coll
Downing, Thomas Finn.....Ohio co.....Coll
Dudding, Jerome.....Winfield, Putnam co.....Prep
Duncan, Henry Clay.....Kenova, Wayne co.....Prep
Duvall, Charles Raymond.....Martinsburg... .....Coll
Duvall, Roy Perrin.....Jordan Springs, Va.....Prep
Eddy, William J.....Cross Roads, Monongalia co.....Coll
Edmiston, Matthew Arnold.....Weston, Lewis co.....Prep

Ellis, Joseph Rolly.....Newburg, Peston co.....Prep & Coll
Ernest, Albert Conley.....Littleton, Wetzel co.....Prep & Coll
Finnell, Ralph.....Clarksburg.....Coll
Fleming, Albert Fletcher.....Morgantown.....Prep
Ford, George Michael.....Masontown, Preston co.....Coll
Fortney, Loraine.....Independence, Preston co..Prep & Coll
Francis, John Wiley.....Moundsville, Marshall co.....Coll
Galford, John Everett.....Walkersville, Lewis co.....Coll
Garlow, Ezra Clark.....Maidsville, Monongalia co.....Engin
Gibson, Bert Thurman.....Tunnelton, Preston co.....Prep & Coll
Gore, Claude Webster .....Clarksburg.....Coll
Gorman, Michael E.....Morgantown.....Prep
Gorman, Roger.....Morgantown.....Prep
Graham, Samuel Willey.....Masontown, Preston co.....Coll
Gregg, Jesse Wilbur.....Morgantown.....Prep & Coll
Greynolds, Lew.....Beverly, Randolph co.....Prep
Grier, John Alexander.....Parkersburg.....Coll
Hackney, Ida Esther.....Morgantown.....Coll
Hackney, Joseph Milton.....Morgantown.....Coll
Hackney, Lilian May.....Morgantown.....Coll
Hall, C. B.....Charlotte, Monongalia co.....Law
Hansbarger, Charles Jacob.....Lindside, Monroe co.....Prep
Hartley, Alva Camden.....Masontown, Preston co.....Prep
Harner, C. Milton.....Morgantown.....Prep & Coll
Hartman, Edward Thornton...Tunnelton, Preston co.....Coll
Hayes, U. S. Grant.....Belington, Barbour co.....Coll
Hayes, Thomas Welford.....Morgantown.....Prep
Henderson, Joseph Lindsey...Monongalia co.....Coll
Herndon, Isaiah Christian.....Bramwell, Mercer co.....Coll. & Law
Hines, William Edgar.....Rock Camp, Monroe co.....Law
Hogg, Gory.....Sewell Depot, Fayette co.....Prep
Holden, William Jackson.....Craigmoor, Harrison co...Prep & Coll
Holbert, John Thomas.....Watson, Marion co.....Prep & Coll
Hood, Charles Philson.....Shinnston, Harrison co.....Prep
Houston, Hough.....Easton, Monongalia co.....Coll
Hughes, John Wilbur.....Troy, Gilmer co.....Engin
Hutchinson, R. E. Lee.....Leroy, Jackson co.....Law
Jackson, James Adolphus.....Kingwood.....Law
Jaco, Charles Homer.....Morgantown.....Prep
Jaco, Linn Miller.....Easton, Monongalia co.....Coll
Jenkins, Samuel Rozel.....Grafton, Taylor co.....Engin
Johnson, George William.....Leetown, Jefferson co.....Coll
Johnson, James Martin.....Long Reach, Tyler co.....Prep
Johnson, Thomas Carskadon...Long Reach, Tyler co.....Prep
Joliffe, William Sherman.....Morgantown.....Prep
Jones, Clement Ross.....Knottsville, Taylor co.....Engin
Kincaid, Dell Busee.....Knottsville, Taylor co.....Prep
Kitson, George Henry.....Weston, Lewis co.....Prep
Knight, Charles Ridgely.....Keyser, Mineral co.....Prep
Kauroku, Walchiro.....Japan.....Law
Krebs, Charles Edward.....N. Martinsville, Wetzel co..Prep & Engin
Kunst, George Henry A.....Pruntytown, Taylor co.....Prep
Lavelle, Thomas Monahan.....Uniontown, Wetzel co...Prep & Engin
Lazier, Arthur Moreland.....Morgantown.....Coll
Lemley, Cassius M. Carl.....Burton, Wetzel co.....Engin
Leonard, William C.....Parkersburg.....Prep
Lewis, Thomas Evan.....Wheeling.....Prep & Coll
Lewis, William Hay.....Clarksburg.....Prep
Link, Charles William.....Duffields, Jefferson co.....Prep
Lipscomb, Archibald Jerome...St. George, Tucker co.....Prep
Lynch, Tillman Davis.....Craigmoor, Harrison co.....Engin
Lynch, Waitman Elliott.....Craigmoor, Harrison co...Prep & Coll
Lyon, Harriet E.....Fredonia, N. Y.....Coll

Madagan, Wm. Christian.....Morgantown.....Prep
Martin, Andrew Kent.....Philippi, Barbour co.....Prep & Col
Martin, Philip Briton.....Herring, Preston co.....Prep
Mann, Edwin.....Fort Spring, Greenbrier co.....Law
Mayers, Clarence Edwin.....Fairmont.....Prep & Coll
McBee, Perry Cobb.....Halleck, Monongalia co.....Prep
McClung, John Alexander.....Reedy, Roane co.....Prep
McCoy, Ernest David.....Buffalo, Putnam co.....Prep
McCoy, George Loren.....Wheeling.....Coll
McEldowney, Samuel Bailey...New Martinsville.....Prep
McGahan, Henry Keyser.....Mineral co.....Prep
McGrew, James Heermans.....Morgantown.....Prep
McMillan, Herbert Chalmers...Huntington, Cabell co.....Prep
McWhorter, John Camillus.....Berlin, Upshur co.....Prep
McWhorter, John Scott.....Buckhannon.....Prep & Coll
Meyer, William Charles.....Wheeling.....Coll
Miller, Charles Frederick.....Keyser, Mineral co.....Prep
Minshall, Frederick Mortimer..Piedmont, Mineral co.....Engin
Moore, John Morgan.....Pt. Pleasant, Mason co.....Prep
Morris, Clifton Elias.....Pleasant Green, Ohio.....Law
Morton, Eskridge Hampton.....Addison, Webster co.....Law
Neale, Thomas Muncy.....Keyser, Mineral co.....Law
Nesbitt, Charles Torrence.....Fairmont, Marion co.....Coll
Norris, Sarah Lowther.....Glenville, Gilmer co.....Coll
Nuzum, John.....Garfield, Jackson co.....Prep & Coll
O'Brien, William Smith.....Weston, Lewis co.....Law
Oesterling, Harry Edward.....Wheeling.....Prep & Coll
O'Hara, Thomas Michael,.....Gladesville, Preston co.....Prep & Coll
Paul, James Washington.....Newburg, Preston co.....Prep & Coll
Percy, Charles Sylvester.....Normantown, Gilmer co.....Prep
Percy, Evart.....Normantown, Gilmer co.....Prep
Peters, Samuel Vinson.....Fort Gay, Wayne co.....Prep
Pierpoint, Pliny Lewis.....Sistersville, Tyler co.....Prep
Phleeger, John Winter.....Piedmont, Mineral co..... Prep & Coll
Post, Melville Davisson.....Romines Mills, Harrison co.....Coll
Protzman, Jesse B.....Morgantown.....Prep
Ramsey, Robert Hudson.....Clarksburg.....Prep & Coll
Reay, David Chadwick.....Duke, Monongalia co..... Prep & Coll
Reynolds, Carson Howell.....Morgantown.....Prep
Reynolds, Frank Cornelius.....Keyser, Mineral co.....Law
Reynolds, Mabel Curry.....Morgantown.....Coll
Rich, Lot Luther.....Morgantown.....Prep
Ridgeway, Charles Nelson.....Maidsville, Monongalia co.....Prep
Riggle, Christian Beall.....Middlebourne, Tyler co.....Law
Rogers, Walter Dudley Neal...Scotdale, Pa..... Prep & Coll
Rose, James Franklin.....Addison, Webster co.....Prep
Ross, Florian Gaie.....Dunkard. Pa.....Engin
Russell, Bennie Watson.....Morgantown.....Prep
Schoonmaker, George Filson...Uniontown, Pa.....Prep
Schoonmaker, Robert Dalzell...Uniontown, Pa.....Prep
Shaffer, Phil A.....Morgantown.....Engin
Sheppard, Addison Hite.....Ready Ripple, Wirt co..... .... Coll
Simmons, Harvey Jefferson....Spencer, Roane co.....Prep
Singleton, George Edwin.....Salt Licke Ridge, Braxton co..... Coll
Sisler, Charles Benton.....Stewartstown, Monongalia co.....Coll
Sisler, Milliard Talford.....Stewartstown, Monongalia co.....Coll
Smith, Andrew Brown.....Uniontown, Pa.....Coll
Smith, Harry William.....Ripley's, Tyler co.....Coll
Steed, Henry Alfred.....Newark, Wirt co.....Prep
Stifel, Henry George.....Wheeling, Ohio co.....Coll
Summerfield, Charles Reese.....Gatewood, Fayette co.....Law
Suter, John Ellsworth.....Piedmont, Mineral co.....Coll
Settle, Joseph Boatwright.....Deep Water, Fayette co.....Law

Thomas, William Marion.....Farmington, Marion co.....Prep
Trotter, James Russell.....Aurora. Preston co.....Coll
Tate, Alexander Gorden.....Randall, Monongalia co.....Prep
Teter,, William Steel.....Belington, Barbour co.....Engin
Thayer, Arthur Love.....Grafton, Taylor co.....Coll
Vance, Cyrus Earl.....Clarksburg.....Prep & Engin
Vance, John Carl.....Clarksburg.....Prep & Coll
Vinson, Linn Boyd.....Ceredo, Wayne co.....Prep
Vinson, Linzy T.....Ceredo, Wayne co.....Prep
Wade, Charles.....Morgantown.....Coll
Warman, Altha.....Morgantown.....Coll
Welton, Archibald James.....Fairmont, Marion co.....Coll
White, Bennett Sexton.....Morgantown.....Coll
White, Charles Lewis.....Morgantown.....Coll
White, Dewitt.....Morgantown.....Coll
White, Kemble.....Belton, Marshall co.....Coll
White, Prescott Cushing.....Morgantown.....Coll
Wiles, John William.....Aurora, Preston co.....Coll
Williams, Allern Derrick.....Uniontown, Pa.....Prep
Willis, Walter Warren.....Bridgeport, Harrison co.....Prep
Wilson, Willis Levi.....Ceredo, Wayne co.....Coll
Woods, Ruth Cassandra.....Morgantown.....Coll
Yost, Lucian Nay.....Amos, Marion co.....Prep
Yost, Walter Burt.....Oakland, Md.....Prep & Coll
Zearley, Edmund Lee.....Point Marion, Pa.....Engin

Counties of West Virginia Represented.

Barbour 3, Berkely 1, Braxton 1, Cabell 2, Fayette 4, Gilmer 5, Grant 1, Greenbrier 1, Hancock 1, Hampshire 1, Harrison 14, Jackson 3, Jefferson 3, Lewis 9, Marion 8, Marshall 5, Mason 1, Mercer 1, Mineral 8, Monongalia 46, Monroe 2, Ohio 6, Preston 15, Putnam 2, Randolph 1, Ritchie 1, Roane 5, Taylor 6, Tucker 2, Tyler 6, Upshur 2, Wayne 5, Webster 2, Wetzel 6, Wirt 2, Wood 4.—Total, 185.

RECAPITULATION BY STATES AND COUNTRIES.

West Virginia	185
Pennsylvania	14
Maryland	2
New York	1
Ohio	1
Virginia	1
Japan	1
Total enrollment for the year	205

Largest former enrollment (1890), 208.

DISTRIBUTION BY DEPARTMENTS.

Collegiate	55
Engineering	14
Law	25
Preparatory and Collegiate	29
Preparatory and Engineering	3
Preparatory	79

Schedule of Recitations—University Department. CHAPEL at 8:15 A. M.

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3 P. M.	4 P. M.
MONDAY.	Physics. Intermediate Greek. Senior Mathematics. Senior German. Junior Metaphysics, Bridges and Graphics (F) Hydraulics and Sanitation (W).	Junior Greek Junior French. History. Zoology (F and W) Political Economy (S) *Analytical Chemistry.* Surveying (F). Roads & R R'ds (W. & S). R. R. Economies (W).	Junior Mathematics. *Anatomy* Inter. and Const. Law. Mechanics (F). Railroad Location (S) Strength of Materi'ls(W)	Chemis ry. Junior German. Senior Metaphysics. *Senior Latin* *Physical Geography* (S). Topography (F). Engineering (W). Stereotomy (S)		Military Science & Tactics.
TUESDAY.	Intermediate Greek. Geology & Mineralogy. *Political Economy* *Agriculture.* *Historical Psychology.* Bridges and Graphics (F) Hydraulics and Sanitation (W).	Junior Greek. Junior French. Rhetoric. Structural Botany(F&W) *Political Science.* *Analytical Chemistry.* Surveying (F. Roads & R. R'ds (W,S). Descriptive Geom (W) Plans & Specificat'n (W)	Junior Mathematics Senior French. Senior English. Anatomy, Phys. and Hygiene. Mechanics (F) Contracts & Reports (F). Railroad Curves (W). Railroad Location (S).	Chemistry. Junior German. Junior English. *Senior Latin.* *Science of Religion.* Topography (F).	*Practical Physics* *Microscopy.* Drawing.	Military Science & Tactics.
WEDNESDAY	Physics. Intermediate Latin. Senior Mathematics. Senior German. Junior Metaphysics Bridges and Graphics (F) Hydraulics and Sanitation (W).	Jun. Greek *or* Jun. Latin Junior French. Zoology (F & W). Political Economy (S). *Analytical Chemistry.* Surveying (F). Roads & R. R'ds (W & S). R. R. Economies (W).	Junior Mathematics. Senior French. Intermediate Greek. *Anatomy.* Inter. and Const. Law. Mechanics (F) Strength of Materi'ls(W) Railroad Location (S)	Chemistry. Junior German. Senior Metaphysics. *Physical Geography* (S). Topography (F) Engineering (W). Stereotomy (S).	*Anglo-Saxon.* Drawing.	Military Science & Tactics.
THURSDAY.	Intermediate Latin. Geology and Mineralogy *Polit Economy.* *Agriculture.* *Historical Psychology.*	Junior Latin. Junior French, Rhetoric. Standard Botany (T,W). *Political Science* *Analytical Chemistry.* Surveying (F). Roads & R. R'ds (W, S) Descriptive Geom (W). Plans & Specificat'ns(W)	Junior Mathematics. Senior French. Senior English. Anatomy, Phys. and Hygiene. Mechanics (F). Contracts & Reports (F) Railroad Curves (W) Railroad Location (S).	Junior German. Junior English. Field Botany. *Senior Greek.* *Science of Religion.*	*Practical Physics.* *Microscopy.*	Military Science & Tactics.
FRIDAY.	Physics. Intermediate Latin. Senior Mathematics. Senior German. Junior Metaphysics.	Junior Latin Junior French. History. Zoology (F, W) Political Economy (S). *Analytical Chemistry.* R. R. Economies (W).	Junior Mathematics. *Anatomy* Mechanics (F). Strength of Materi'ls(W) Railroad Location (S).	Jun.Germ. Jun. English Field Botany. *Senior Greek.* Senior Metaphysics. Topography (F) Engineering (W). Stereotomy (S).	*Anglo-Saxon.* Field Practice. Engineering.	

Elective Studies in *Italics*. The Initials F, W, S

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

STATION STAFF.

JOHN A. MYERS, A. M., PH. D.,
Director.

C. F. MILLSPAUGH, M. D.,
Botanist and Microscopist.

D. D. JOHNSON, A. M.,
Agriculturist.

R. J. J. DE ROODE, PH. D.,
Chemist.

A. D. HOPKINS,
Special Agent in Entomology.

SUSIE V. MAYERS,
Stenographer and Book-keeper.

The Station was organized in June, 1888, by the Board of Regents of the the West Virginia University, accepting the Congressional appropriation, electing a Director, directing a Station building to be constructed and outlining the policy it wished pursued, and appointing a committee of its body to perfect its organization. Since then, the building has been completed and provided with ample laboratories, offices, libraries, apparatus and the necessary facilities for carrying on the scientific investigations contemplated under the Congressional Act establishing the Station.

The objects of the Station are stated as follows in the Act establishing it :

Section 2. "That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth ; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects of crops of different kinds; the adaptation and value of

grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The scientific work of the Station is published in bulletins and in the Annual Report, which are distributed free of charge to all farmers in the State desiring the same. In addition to this, the Station attempted during the past winter to develop an interest in farmers' institutes in various sections of the State, and a number of farmers' meetings were held with this object in view. During the past year considerable attention has been devoted to experimenting upon the effects of fertilizers upon the soils in different sections of the State. A large amount of Botanical, Entomological and Chemical work has been done. The results of the work in the various departments not already published will appear in due time.

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seeds, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, or study practical dairying, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

WEST VIRGINIA UNIVERSITY

CATALOGUE 1891-2.

CATALOGUE

—OF—

WEST VIRGINIA UNIVERSITY,

MORGANTOWN.

For the Year 1891-92.

CHARLESTON.
MOSES W. DONNALLY, PUBLIC PRINTER.
1892.

CALENDAR.

JUNE, 1892.—APRIL, 1894.

1892	S	M	T	W	T	F	S
JUNE.	....	....	....	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	....	....
	....	....	....	....	....	....	....
JULY.	..	....	....	....	....	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	....	....	....	....	....	....
AUGUST.	....	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	....	....	....
	....	....	....	....	....	....	....
SEPT.	....	....	....	....	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	....
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OCT.	....	....	....	....	....	..	1
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UNIVERSITY CALENDAR.

The University year consists of three terms beginning for the year 1892-3, respectively as follows: The Fall term, Wednesday, September 14th, 1892; Winter term, Wednesday, January 4th, 1893; and the Spring term, Wednesday, April 5th, 1893. The annual commencement is on the Second Wednesday of June.

1892.

May 30-June 6th—Final examinations.

June 5th—Sunday, 11 A. M., Baccalaureate Sermon by Rev. George Elliott, of Washington, D. C.

June 6th—Monday, 8 P. M., Regents' Prize Contest in Declamation.

June 7th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 8—Wednesday, 10 A. M., Commencement.

" 1 P. M., Alumni Banquet.

Vacation till the second Wednesday in September.

September 13th—Tuesday, Entrance Examinations.

September 14th—Wednesday, 8:15 A. M., Fall Term begins.

November 23rd—1 P. M., Thanksgiving recess begins.

November 28th—Monday, 8:15 A. M., Exercises resumed.

December 1st—Thursday, 7:30 P. M., Senior Orations.

December 15th-22d—Fall Term examinations. Vacation of two weeks.

1893.

January 4th—Wednesday, 8:15 A. M., Winter Term begins.

February 22nd—Wednesday, Washington's birthday. Holiday.

February 23rd—Thursday, 7:30 P. M., Senior Orations.

March 22-28th—Winter Term Examinations. Vacation one week.

April 5th—Wednesday, Spring Term begins.

June 6-12th—Final examinations.

June 10th—Saturday, 8 P. M., Regents' Prize Contest in Declamation.

June 11th—Sunday, Baccalaureate Sermon.

June 14th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.	Term Expires.
1.	J. B. SOMMERVILLE	Wheeling	1897
2.	CLARENCE L. SMITH	Fairmont	1897
3.	JOHN C. VANCE	Clarksburg	1892
4.	PEREGRIN HAYS	Glenville	1892
5.	JOHN G. SCHILLING	Spencer	1893
6.	EDWARD A. BENNETT	Huntington	1893
7.	WIRT A. FRENCH	Princeton	1894
8.	M. J. KESTER	Union	1894
9.	JAS. F. BROWN	Charleston	1895
10.	THOMAS J. FARNSWORTH	Buckhannon	1895
11.	JOSEPH MORELAND	Morgantown	1895
12.	JOHN A. ROBINSON	Patterson's Creek	1896
13.	W. W. BROWN	Kabletown	1896

Officers of the Board.

JOHN A. ROBINSON, PRESIDENT,
JOHN I. HARVEY, TREASURER,
W. P. WILLEY, SECRETARY,
JOHN A. MYERS, SUP'T. GROUNDS AND BUILDINGS.

Executive Committee.

JOHN A. ROBINSON, CHAIRMAN,
M. J. KESTER,
J. B. SOMMERVILLE,
T. J. FARNSWORTH,
JOHN C. VANCE.

Experiment Station Committee.

JOHN A. ROBINSON, CHAIRMAN,
T. J. FARNSWORTH,
W. W. BROWN,
JOSEPH MORELAND,
J. G. SCHILLING.

Building Committee.

JOHN A. ROBINSON, CHAIRMAN,
C. L. SMITH,
JOHN C. VANCE,
PEREGRIN HAYS,
WIRT A. FRENCH.

FACULTY AND TEACHERS.

In the Order of Official Seniority.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric.

P. B. REYNOLDS, D.D., VICE PRESIDENT,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A., LL D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages and Literature.

I. C. WHITE, A. M., PH. D.,
Professor of Geology.

A. W. LORENTZ, A. M.,
Principal of Preparatory Department.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence and History.

A. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., D. S.,
Professor of Biology.

JOHN A. MYERS, PH. D.
Director of the Experiment Station.

HOWARD N. OGDEN, A. M.,
Professor of English.

HENRY B. DAVENPORT, JR., C. E.,
Professor of Civil and Mining Engineering.

JOHN L. JOHNSTON, C. E.,
Professor of Applied Mathematics and Drawing.

JAMES S. STEWART, M. S.,
Professor of Mathematics.

F. L. EMORY, B. S. M. E.,
Professor of Mechanical Engineering.

T. C. ATKESON, PH. B.,
Professor of Agriculture.

First Lieutenant FRANK DEW. RAMSEY, U. S. A.,
Professor of Military Science and Tactics.

A. J. HARE, A. B.,
Assistant in Preparatory Greek and Latin.

B. C. ALDERSON, A. B.,
Assistant in Ancient Languages.

S. B. BROWN, A. M.,
Assistant in Geology.

T. E. DAVIS, A. B.,
Assistant in Preparatory English and Mathematics.

E. H. VICKERS, A. B.,
Assistant in Preparatory Mathematics.

MISS CLARA HOUGH,
Librarian.

AGRICULTURAL EXPERIMENT STATION.

Official Staff.

JOHN A. MYERS, PH. D. ..... Director.

C. F. MILLSPAUGH, M. D. ..... Botanist and Microscopist.

D. D. JOHNSON, A. M ..... Agriculturist.

R. J. J. DE ROODE, PH. D. ..... Chemist.

A. D. HOPKINS ..... Special Agent in Entomology.

SUSIE V. MAYERS ..... Stenographer and Book-Keeper.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Script" donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and by daily boat from Pittsburgh. It is expected that rail communication will be completed to Pittsburgh during the present year. Morgantown is a small place, where there are few temptations to allure young men from study, and is in this respect an admirable location for an educational institution Its climate is healthful, the air pure and bracing and free from malaria. The town is supplied with pure mountain water by a system of water works, and with natural gas for fuel and illumination from the Mt. Morris gas wells.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures, three stories high, which contain the lecture and recitation rooms, library, museum, commencement hall, and the rooms of the two literary societies.

A new building for the Mechanical Department will be erected during the coming summer, and will be ready for occupancy by the opening of the fall term in September next.

It is also expected that plans will be adopted and contracts made at the next meeting of the Board of Regents, in June, for the erection of a building for the departments of Physics, Chemistry, Civil Engineering, &c., for which the Legislature has authorized an expenditure of $40,000. This building will not be available until the autumn of 1893.

It is hoped that the building for the Armory and Commencement hall will be completed this year.

Organization.

The organization of the University includes the following departments:

1. The collegiate department, in which courses of study are offered

leading to the degrees of Bachelor of Arts, Bachelor of Sciences, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Agriculture. Post-graduate or University courses are also offered for the degrees of Master of Arts and Master of Sciences.

2. A military department in which instruction is given in Military Science and Tactics by a graduate of West Point, detailed by the President from the United States Army.

3. A law department having a professional course of study leading to the degree of Bachelor of Laws.

4. A preparatory department, for preparing students to enter the collegiate classes.

5. The Agricultural Experiment Station.

Endowment Fund: Income.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each counnty being entitled to one student under free tuition for every five hundred population in the county. This does not apply, however, to the Law School.

Additional Endowment.

By an act of Congress passed August 30th, 1890, there is appropriated for the year ending June 30th, 1890, to each State and Territory the sum of $15,000, for the further endowment of the Agricultural Colleges established under the act of Congress of July 2, 1862. The appropriation is an annual one, and increases $1,000 per year until it reaches a maximum of $25,000, after which the annual appropriation is to be $25,000. The University is the beneficiary of the act for this State. This act requires that each State shall, as a condition of receiving the benefits thereof, make provision for the instruction of colored youth in Agricultural and Mechanical sciences. The Legislature of this State at its recent session, established such an institution in the county of Kanawha, and appropriated $3,000 annually for the first five years, and $5,000 annually thereafter, from this fund, to assist in its maintenance. The remainder of each annual appropriation comes to the University. By the provisions of this act, the fund can be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

Other students are allowed to enter the Corps as volunteer cadets.

The Calendar.

The University year begins on the second Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall term begins on the second Wednesday in September and ends as nearly as may be three days before Christmas. A vacation

of two weeks follows. The Winter term then begins and continues twelve weeks, followed by a vacation of one week. The Spring term then begins and closes with the commencement exercises.

Requisites for Admission.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Those wishing to enter the Academic Department must stand a satisfactory examination on such studies of the Preparatory Department as are related to the classes they desire to enter.

IV. Graduates of the Academic Department of the Normal School or any of its branches, or from the approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue under the "Preparatory Department."

V. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VI. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally."

VII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating beyond the time allowed for so doing, he will not thereafter be allowed to enroll, except by special permission of the Faculty, upon the presentation of a satisfactory explanation.

Admission of Female Students.

At the meeting of the Board of Regents in June, 1889, the Collegiate Department of the University was opened to female students.

Selection of Studies.

Each student in the collegiate department is required to select one of the courses of study for the bachelor's degrees, unless for sufficient reasons the Faculty allow him to enter as a special student. He is required to attend not less than fourteen and not more than sixteen recitations or other class exercises per week, and to adhere, throughout the year, to the studies selected, unless the Faculty, for sufficient reasons allow him to attend a less number of exercises, or make an exchange of studies. Students must select their studies with reference to the printed schedules of recitations and examinations. They will not be allowed to divide

hours between classes, nor to take two subjects classed together in the examination schedules.

Special Students.

The collegiate department is organized with reference to the completion by the student of a full undergraduate course of study, leading to one or the other of the bachelor's degrees. It is assumed, therefore, that students are here for this purpose, and any student seeking a special or partial course, must have special permission of the Faculty, under the following regulations:

1. No student, who is under twenty-one years of age, will be allowed to take a special course, except upon the written request of his parent or guardian.

2. In all cases, the student must submit in writing to the Faculty a statement showing the details of this special course of study he wishes to pursue, together with the purpose he has in view in selecting such course, the probable time of his attendance, and the amount and character of his previous training and acquirements.

3. In all cases, the Faculty will determine whether the reasons assigned are sufficient and the proposed course of study suited to the ability and acquirements of the applicant, and adapted to accomplish the purpose or end in view in taking it.

4. Special students will be under the same rules as regular students, as to amount and character of work required, and must pass examinations with other students in their classes.

Examinations.

Written examinations are held in each class at the close of each term, and at such other times as each Professor may deem necessary; *provided*, such special examinations shall not interfere with other classes.

The time allowed for examination is not less than two hours, and not more than five hours.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

No student who may be absent and not thus excused, shall be allowed to continue in connection with the University.

When a student has attended the examination in any class and has failed to pass, no second examination will be allowed such student except by permission of the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10 in any subject extending throughout the whole year, who is absent, for some unavoidable cause, from the regular examinations held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and, provided further, that such exemption from examination will not be allowed for more than one term in any academic year.

Grading.

Recitations and examinations are graded on a scale of ten. In order to pass from a lower to a higher class in any subject, a student must attain an average standing of 7 on a scale of 10, for each term in that class during the year.

In ascertaining the students' standing in his classes, examination marks count one-half and recitation marks one-half.

All absences from recitations are counted against the student in estimating his standing in his classes, except that any student may be excused for absences from any class, equal to one-tenth of the exercises of that class for a term, upon rendering to the Faculty a sufficient excuse, and making up the work of the class from which he was absent.

Entrance Examinations.

All new students are expected to be present on the day preceding the opening of the Fall Term, being for this year September 13th, in order to be examined on the studies required for admission and on those required for admission to the particular classes they desire to enter. They should report at the Presidents's room at the University not later than 9 o'clock A. M., on September 13th, and be by him directed to the examiners in the various branches.

Directions for New Students.

Students who have not before attended the University should, on arriving, report to the President, who will assist them in procuring rooms, and give them directions as to the payment of fees, matriculation, enrollment and selection of their studies.

Matriculation and Tuition Fees.

All students, except appointed cadets, are requirgd to pay a matriculation fee of $5.00 when entering the University. This applies to all departments.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Matriculation fee	$5 00
Tuition in the Law Department (per term)	8 00
Contingent fee in all Departments (per term)	2 00

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

All fees must be paid to the Treasurer, promptly on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever.

Ministerial students are admitted free, upon proper testimonials.

Regulations Concerning Text Books issued to Cadets.

Under the laws governing the University, appointed cadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with which he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book agent and reissued so long as they may serve the purpose of text-books.

No cadet has a right of property in any text-book issued to him while he is a cadet. If he completes a course and takes a degree, he is allowed by the Board of Regents to retain the text-books issued to him, *provided*, he remains a cadet until graduation. If he is discharged or resigns before graduating, *he forfeits all allowances and text-books*, which must be returned to the proper officers.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and tableware. One of the club acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families cost $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of thirty-six weeks.

Room rent	from	$27 00 to	$45 00
Boarding	"	63 00 to	90 00
Washing	"	9 00 to	13 00
Lights and Incidentals	"	20 00 to	20 00
Text-Books (average)	"	8 00 to	15 00
Contingent Fees	"	6 00 to	6 00
Total		$137 00.	$189 50

To this add matriculation fee of $5 00 for the first year and the tuition fees of those students who are required to pay tuition.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. *No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.*

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises.

A report is sent at the beginning of each year to parents and guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, the parent or gurdian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is specially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interests of the student and of his class-

mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Religious Worship.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject.

"*Resolved*, That each student will be required to attend on Sabbath the public service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University departments, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. A student competing for the prize shall write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.
2. All essays shall have fictitious signatures, accompanied with a sealsd letter containing both the real and fictitious names.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.
4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15.00 for Declamation, shall be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1891, these prizes were awarded as follows: Essay, Mr. E. T. Hartman; Declamation, Mr. H. A. Steed.

Library and Reading Room.

About five thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works of the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general literature.

The friends of education are respectfully requested to make contributions to its shelves.

A deposit of $2.00 is required of all students who wish to avail themselves of the privilege of the Library. This is intended to secure the safe keeping and return of the books borrowed.

The Library has been removed to the large room formerly used as the Chapel, and is now open every week day from 8:30 A. M. to 12 M., and from 2 to 5 P. M., for the delivery of the books and for consultation. Part of

the room is used as a Reading Room, which is supplied with the leading magazines and periodicals of this country and Europe.

A large and valuable addition of books in the various departments of Science and Literature has been added to the Library during the year.

Books of reference are not allowed to be taken from the Library; so that they are accessible for consultation at all hours.

Arrangements are also made by which books on special subjects are temporarily withdrawn from circulation when required for the use of students in any special study, or for the preparation of essays required in connection with the regular class-work.

Museum.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

Literary Societies.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticism, are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

Other Societies.

THE ENGLISH CLUB.

A society formed by the students in the advanced courses in English for the prosecution of special studies on subjects requiring research, holds biweekly meetings on Saturday evening. The original papers read before the club are type written and bound into a volume at the close of the college year. Prizes for meritorious work are offered for competition. The club also maintains a lecture course. Under its auspices the following lectures were given during the past college year; in December "University Extension" by Prof. H. N. Ogden; in January "Some Elements of Success in Life" by Dr. Julius Grammar, of Baltimore; in February "Fads in College Education" by Dr. John A. Myers; in May "Life and Times of Henry Clay" by Judge Daniel B. Lucas, of Charleston.

THE ENGINEERING SOCIETY.

The success achieved by this organization is very encouraging. Its purpose is for the discussion and encouragement of engineering projects. The reading room being well supplied with engineering magazines and literature, affords the industrious student ample facilities for cultivating a general and comprehensive knowledge of engineering in all its branches.

COURSES OF INSTRUCTION

IN THE

COLLEGIATE DEPARTMENT.

The courses of instruction offered by the professors and instructors in the Collegiate Department are stated on the next following pages. For convenient reference, the various subjects are arranged alphabetically as follows:

Agriculture.
Ancient Languages.
Biology.
Chemistry and Physics.
Civil Engineering.
English.
Geology.
History.
Mathematics.
Mechanical Engineering.
Mechanic Arts.
Metaphysics.
Modern Languages.
Political Science.

Agriculture.

PROF. ATKESON.

1. Lectures and Recitations.

First Term—Two times a week. Elementary Agriculture. Emerson and Flint's "Manual of Agriculture."

Second Term—Two times a week. Farm Economy. "How the Farm Pays." "Success in Farming."

Third Term—Two times a week. Farm Accounts. Farm Law. Bennett's Lectures, and Code of West Virginia.

2. Lectures and Recitations.

First Term—Two times a week. Soils. Plant Growth. Fertilizers and Animal Life. Thompson's "Science in Farming."

Second Term—Two times a week. Stock Breeds and Breeding. Curtis's "Horses, Cattle, Sheep and Swine."

Third Term—Two times a week. Horticulture, Gardening, "American Fruit Culturist," "Gardening for Profit," "Propagation of Plants."

3 LECTURES AND RECITATIONS.

First Term—Two times a week. Chemistry of the Farm. Storer's Agriculture.

Second Term—Four times a week. Storer's Agriculture, Stewart or Armsby's Stock Feeding.

Third Term—Four times a week. Storer's Agriculture, Farm Machinery, Appliances and Conveniences.

Ancient Languages.

PROF. BERKELEY: MR. ALDERSON.

1. LATIN.

Fall Term—Virgil's Bucolics and Georgics. Three hours a week.
Winter Term—Horace's Odes and Epodes. Two hours a week.
Spring Term—Cicero de Senectute and de Amicitia. Three hours a week.

MR. ALDERSON.

2. LATIN.—*Three hours a week throughout the year.*

Fall Term—Livy; Wilkins' Roman Literature.
Winter Term—Horace's Satires and Epistles.
Spring Term—Cicero de Officiis.

MR. ALDERSON.

3. LATIN.—*Two hours a week throughout the year.*

Fall Term—The Agricola and Annals of Tacitus.
Winter Term—The Annals of Tacitus (continued.)
Spring Term—Juvenal.

PROF. BERKELEY.

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—Harper's or White's.

4. GREEK.

Fall Term—Herodotus. Two hours a week.
Winter Term—Homer's Iliard. Three hours a week.
Spring Term—Homer's Odyssey. Two hours a week.

MR. ALDERSON.

5. GREEK.—*Three hours a week throughout the year.*

Fall Term— Xenophon's Memorabilia; Jebb's Greek Literature.
Winter Term—Plato's Apology and Crito.
Spring aerm—Euripides.

PROF. BERKELEY,

6. GREEK.—*Two hours a week throughout the year.*

Fall Term—Demosthenes.
Winter Term—Sophocles.
Spring Term—Thucydides.

PROF. BERKELEY.

As mentioned above, in the case of the Latin language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading,

Lexicon Recommended for each Class—Liddell's and Scott's.
For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin according to the so-called Roman method.

Candidates for the degree of Bachelor of Arts are allowed to substitute one year of French for Latin 3 and one year of German for Greek 6, or two years of either for both Latin 3 and Greek 6.

Biology.

PROFESSOR HARTIGAN.

1.—FIELD BOTANY. Two hours.

This class meets twice a week during the Winter and Spring terms. The Winter term is devoted to the study of the text, which is expanded by lectures from time to time, while the Spring term is given to practical work in the analysis of flowers. Examinations are held at the end of each term, and in addition to the practical work done in the class room and field, each student is required to prepare an herbarium of one hundred specimens. Text is Wood's Botanist and Florist. In analysis, Wood, and the Systems of Gray and Kellerman.

2.—STRUCTURAL BOTANY Two hours.

Two hours a week are given to this subjects during the Fall and Winter terms. The Fall term is given to the study of general plant Anatomy and Physiology; and the Winter term to the special consideration of these subjects, students being instructed in the practical use of the microscope in the study of Plant Histology. Bessey's Structural Botany is the text used. For reference, Gray, Sachs, Crookshank's Bacteriology, Bentley, Cooke.

3.—ZOOLOGY. Three hours.

Three hours per week are provided for this subject during the Fall and Winter terms. The Fall term is given to the study of comparative Zoology. This part of the course is mainly by lectures. The Winter term is devoted to the study of Systematic Zoology, Embryology, and Histology. The students are instructed in the use of the microscope, and are required to use it in their investigations each day in the class room. Members of this class are required to skeletonize five vertebrate animals, as practical work. The text in this course is Orton's Zoology, with the works of Darwin, Haeckel, Spencer, Packard and Claus for reference.

4.—PHYSIOLOGY AND HYGIENE. Five hours.

This course is entirely by lectures, and no special work is used as a text, though any standard work is recommended for collateral reading. Five hours weekly are provided for this course during the Spring term. Books recommended for reading are: Flint's Human Physiology, Yeo's Manual, Kirke, Dalton. In Hygiene—Huxley and Youman, Wilson, Parkes.

5.—HUMAM ANATOMY. Five hours.

Five hours weekly are given to this subject during the Fall and Winter terms. The course is entirely by lectures, and is designed as a special course in this branch for those desiring to prosecute the study of Medicine and Surgery. The skeleton or cadaver will furnish the proper text of each lecture, though models, manikins, specimens and charts will be used when necessary to elucidate any special subject.

Students in this course are required to dissect three parts of the human body and to be examined thereon. The dissecting room is open each evening from 7 till 10 o'clock, and all the students are required to be present. At the end of the Winter term students of this class enter the class in Human Physiology (Course 4).

Keene's Edition of Gray's Anatomy is the text used.

6.—MICROSCOPY. Two hours.

This course is elective. Instruction is given in Microscopical technique, Vegetable and Animal Histology and Bacteriology. The principles of staining, germ culture. Methods of Analysis of air and water are studied as applied in Practical Hygiene. The course is by lectures and practical laboratory work. Two hours per week throughout the year, is the time allowed this course.

Chemistry and Physics.

PROF. WHITEHILL.

1 PHYSICS. Three hours a week.

In *Physics*, as a preparation for after study, the leading principles of of Mechanics are studied during the Fall term. During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced throughout the course, and the modern doctrines of Molecular Physics are fully explained.

2. PRACTICAL PHYSICS. Two hours a week.

In *Practical Physics*, the course is intended to aid the student in acquiring skill in the use of Physical apparatus, and is open to those who have taken the course of general Physics in the University, or who can stand an examination on the matter contained in the text books of the grade of Avery's Natural Philosophy or Gage's Elements of Physics. So far as the apparatus permits practical work in dynamics, sound, heat and light are undertaken, and the elements of electrical engineering receive attention.

3. CHEMISTRY. Three hours a week.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods o turning chemical knowledge to practical account. Inorganic Chemistry, ann Chemical Philosophy are studied during the Full and Winter terms, and Organic Chemistry during the Spring term.

4. ANALYTICAL CHEMISTRY. Five times a week.

In *Anylitical Chemistry*, facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals, and are required to spend from one to two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work. During the Spring term especial attention is directed to some of the more important medical preparations and to the analysis of waters; and an elementary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in an elementary work on the subject named.

Apparatus.

Students in the several classes have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Brush Dynamo, 3 Trœmer balances, Jolly balance, 2 Ruhmkorff coils, Holtz and plate electrical machines with accessories, Leyden and Galvanic batteries, resistance coils, amperemetre, galvanometers, phonograph, siren, Geissler tubes, microscope, spectroscope, polariscope, heliostat, colorimeter, 2 air pumps with accessories, sonometer, convex and concave mirrors, radiometer, meteorological instruments, apparatus for electroplating and gas analysis, telephone, telegraphic instruments, combustion furnaces, photographer's outfit, models, pendulums, etc.

The method of instruction is by text-books, lectures and experiments. Each course requires one year for its completion.

Civil Engineering.

PROFESSORS DAVENPORT AND JOHNSTON.

1. LAND SURVEYING Recitations and Field Work.
   Fall Term—Four times per week. Gillespie's Surveying.
   MR. DAVENPORT.
2. DESCRIPTIVE GEOMETRY. Projections, shades, shadows and Perspective
   Winter Term—Four times per week.
   MR. JOHNSTON.
3. TRIGONOMETRIC SURVEYING. Adjustment of instruments, use of barometer, leveling &c.
   Spring Term—Four times per week.
   MR. DAVENPORT.
4. MECHANICS. Recitations.
   Fall Term—Five hours per week. Wood's Elementary Mechanics.
   MR. DAVENPORT.
5. MECHANICS. Recitations.
   Winter Term—Four hours per week. Wood's Analytical Mechanics.
   MR. DAVENPORT.
6. MECHANICS. Strength of materials of Engineering.
   Spring Term—Four hours per week. Tensile, transverse and compressive tests of iron, steel, wood, &c. Rankine, Weisback, Lauza.
   MR. DAVENPORT.
7. ARCHITECTURE. The orders of: ancient, mediæval and modern architecture.
   Lectures and Recitations. Three times per week.
   MR. JOHNSTON.
8. STEREOTOMY—Recitations, and making of patterns and models.
   Fall Term—Two hours per week. Warren's Stereotomy.
   MR. JOHNSTON.
9. BRIDGES AND GRAPHICS—Recitations and designs.
   Fall Term—Four times per week. Merriman.
   MR. JOHNSTON.

10. RAILROADS—Theory and practice, preliminary location, estimates of probable traffic, cost, etc.

Fall Term—Four times per week. Searle's, Henck's and Wellington's works on railroads.

MR. JOHNSTON.

11. MINING—Surveys of mines, draining, timbering, ventilating, ore dressing, &c.

Fall Term---Three times per week. Overman; Osborne; Ihlseng.

MR. DAVENPORT.

12. GEODESY—Higher surveying, method of least squares.

Winter Term—Two times per week.

MR. DAVENPORT.

13. METALLURGY—The metallurgy of iron and steel.

Winter Term---Three times per week. Overman; Greenwood.

MR. DAVENPORT.

14. HYDRAULICS—Theoretical and practical.

Winter Term---Four times per week. Merriman.

MR. JOHNSTON.

English.

PROF. OGDEN.

1. ENGLISH LANGUAGE AND LITERATURE.

History and growth of the English Language and Literature. Three hours weekly, Tuesday, Thursday and Friday--11:30 A. M.

The first half year is given to the history and philological study of the English language, using as texts: Lounsbury, Trench and March.

The second half year is devoted to a synoptical view of the contents and history of English literature, using as texts: Arnold's Manual and Hawthorne and Lemon's American Literature, and for collateral reading critical editions of English classics.

In each half year the student submits two essays on assigned topics, connected with the subject matter of the course.

Instruction is by lectures, with frequent quizzes and review examinations on the lectures, assigned texts and collateral readings.

2. RHETORIC.

Two hours weekly. Tuesday and Thursday—9:30 A. M. Texts: Genung's Rhetoric and Rhetorical Analysis and Gummere's Poetics. Frequent practical exercises in essay writing and analyses of themes are required throughout the year, and in addition each student submits in each half year, a paper giving the results of individual study on an assigned topic related to the subject matter of the course.

Instruction is by lectures, recitations, review examinations and class discussions.

3. ENGLISH LITERATURE AND LITERARY CRITICISM.

Two hours weekly, Tuesday and Thursday---10:30 A. M. This course is introduced by lectures on the province, purposes, and principles of literary criticism, which are followed by a series of studies of selected authors and periods of English literature.

The class work, in the first half year, is given to English prose and prose writers, using as texts and for reference: Hunt, Minto, Earle and Garnett, and in the second half year, to English poetry, using as texts and for reference, Minto, Stedman and Ward's English Poets. During the year each student prepares and reads at the lecture hour or in a class

conference, three critical papers; the first on the life and wrltings of a designated prose writer, the second on the life and writings of a designated poet, and the third on the writers and their works of some desigted age, epoch, class, school or period in English literature.

Instruction is by lectures, class discussions and reports on collateral reading.

To enter this course, students must have passed in courses 1 and 2.

4. Anglo-Saxon.

Two hours weekly, Monday and Friday. Elective. Texts: Sweet's Primer and Reader, and Library of Anglo-Saxon Poetry (Ginn & Co.) The relation of Anglo-Saxon to Modern English, and the domestic life, manners, customs, institutions, laws and government of the first English people are treated in special lectures. To enter this course students must have passed in Course 1.

5. Early and Middle English.

Two hours weekly. (Lecture hours to be arranged.) Optional. Texts: Morris & Skeat's Specimens of Early English, Skeat's Ed. of Chaucer, and Mayhew & Skeat's Middle English Dictionary.

This course is open only to those who have passed in Course 4.

6. American Literature.

Two hours weekly. (Lecture hours to be arranged.) Optional. Instruction is by lectures, special studies of American authors and class discussions with Richardson's American Literature and Stedman's Poets of America as texts.

This course is open to those who have passed in Course 3.

Geology.

PROF. WHITE: MR. BROWN.

1. This course is open to all students who have attained proficiency in Chemistry, Botany and Zoology and is required of all candidates for the degree of A. B. The class meets on Tuesday and Thursday during the Fall and Winter terms.

Mr. Brown.

2. This course continues throughout the year and is required of the Scientific and Engineering students.

In the case of Engineering students proficiency in Chemistry only is required before entering. In the Fall term this class meets on Tuesdays and Thursdays at the same hour as the general class in Course 1. In the Winter and Spring terms it meets on Mondays and Fridays.

Mr. Brown.

(Prof. White will lecture occasionally on special subjects to the classes in Courses 1 and 2).

3. In addition to this regular required work for the Academic degrees an advanced course in Practical Geology will be given by Prof. White to any students who desire to become specialists. This course will include original research in the construction of sections, tracing of strata, and the making of Geological maps of particular districts, as well as reports upon fossils, minerals and other features of the geologic terranes. There will be no stated meetings of the classes in this course, but the members will report their work to Prof. White for criticism and correction, as well as guidance.

4. MINERALOGY.

Winter Term.—Two exercises a week.

This course is open to all, but is required of the Engineering students. The work will be mostly practical, and will consist of minute examinations of hand specimens of the various minerals, and of blowpipe and acid tests of many of them.

MR. BROWN.

5. PHYSICAL GEOGRAPHY.

Fall and Winter terms. Two hours a week. Elective course.

Numerous excursions to the country will be made with the students during the Fall term.

MR. BROWN.

EXCURSIONS.

Local excursions, on Saturdays especially, will be made by the regular classes during the Fall and Spring Terms, and during the Spring Term of each year, usually about the middle of May, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivaled facilities for the study of all problems connected with this useful science, and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific course of the University, but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

History.

PROF. WILLEY.

The course of instruction in this subject is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study extends through the year, the class reciting two hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text-books are Myer's Ancient Mediæval and Modern histories; with *reference* to Ridpath's Encyclopædia of Universal History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays, (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the second and third terms on "Civics," tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the governmental machinery of modern towns, counties, states and nations.

POLITICAL SCIENCE.

An elective course in Political Science is given in this department when a sufficient number of students offer to form a class. The course will be supplemental to the series of lectures on Civics delivered to the class in History, and is open only to those who have taken the course in History.

Mathematics.

PROF. STEWRT.

1. ALGEBRA, GEOMETRY, TRIGONOMETRY, ANALYTIC GEOMETRY.
Four hours a week throughout the year.
Fall Term.—Algebra and Geometry completed—Wells.
Winter Term. Trigonometry—Wentworth's.
Spring Term. Plane Analytic Geometry.—Wentworth's.

2 ANALYTIC GEOMETRY. CALCULUS.
Three hours a week throughout the year.
Fall Term. Solid Analytic Geometry, Calculus—Taylor.
Winter Term. Differential Calculus, Curve Tracing.
Spring Term. Integral Calculus, Rectification of Curves.
Course 1 is required to enter this course.

3. ASTRONOMY.
Two hours a week throughout the year—Young's or Newcomb's.

Students are required to pass an examination in University Algebra through undetermined co-efficients, and in Plane Geometry, in order to enter course 1.

Mechanical Engineering.

1. MECHANICAL DRAWING.
Spring Term—Four times a week. Use of instruments, geometrical, instrumental flat drawing, hatching, lettering, elementary draughting, round writing.

2. MECHANICAL DRAWING.
Fall Term—Four times a week. Line shading, projection, development and intersection of surfaces, shading.
Winter Term—Four times a week. India ink coloring, use of brushes and colors, plane and isometric projection, linear perspective, shades and shadows.
Spring Term—Four times a week. Finished drawings of spur gears, bevel gears, cams, principles of mechanism and mechanical movements.

3. MACHINE DESIGN.
Fall Term—Four hours a week. Elements of machine design, cranks, arms, levers, connecting rods, valve-gear, valve motions, cylinders, pistons, governors, cross-heads, beds, shafts, and general details.
Winter Term—Four times a week. Designing special machines copying, tracing, and making working drawings for shop-work, blue-printing, assemblage drawing.

Spring Term—Thesis Drawing. At least fifty hours. A Thesis drawing is to accompany the thesis as a finished production

both as to design and execution. This is intended to show the ability of the student as a designer, engineer and draughtsman.

4. *Winter Term*—Four hours a week.

(*a*) THERMODYNAMICS.

Mechanical theory of heat, study of the principles of the science, development of the fundamental equations and their applications to air, steam, and gas engines, study of properties of steam, methods of finding constants, and their application to the indicator, injector, boilers, heaters.

(*b*) STEAM ENGINEERING.

Descriptions of engines, proportions for cylinders, valves, pistons, shafts, fly-wheels, governors, dimensions of boilers, thickness and setting chimneys, safety-valves, pumps, heaters, and steam plant detail.

5. MECHANICAL LABORATORY.

Fall and Spring Term—Six hours a week.

Testing of boilers, engines, use of calorimeters, indicator, planimeter, speed counters, pantograph, pony-brake, dynamometers, dynamos, motors, injectors, gauges, and apparatus, tests on material, strength of wood, iron, steel, leather, experimental work and investigation.

COURSES IN MECHANIC ARTS.

For the benefit of those wishing to pursue a course in shop-work not leading to a degree, the following is offered. These are the most practical and pertain strictly to the mechanic arts, shop practice and manipulation, and form the course of shop-work in the Department of Mechanical Engineering. The object will not be to teach a trade, but to teach the fundamental principles of mechanic arts through the manipulation of tools.

1. WOOD WORKING.

Fall Term—Six hours a week.

Carpentry, joinery. Practice given in sawing, planing, chiseling, boring, guaging, etc., use of machine tools and great variety of hand tools.

Winter Term—Six hours a week

Wood-turning. Practice given in hard and soft wood-turning, boring, chucking, straight, taper, and template work.

Spring Term—Six hours a week.

Pattern-making. In this branch the two foregoing are combined in their relation to pattern-making as applied to machine construction.

2. IRON AND STEEL FORGING.

Fall and Winter Terms—Six hours a week.

Iron forging. Practice in drawing, bending, twisting, upsetting, heading, welding, punching, cutting, etc.

Spring Term—Six hours a week.

Steel forging. Drawing, shaping, heading, punching, fullering, welding, forming, hardening, tempering, annealing, tool-dressing.

3. FILING.

Fall Term—Six hours a week.

Chipping and filing metals. Chipping with cold chisel, cape chisel, beveling, chamfering, key-seating, filing, draw-filing, polishing, drilling.

4. IRON TURNING.

Winter and Spring Terms—Six hours a week.

Iron turning. Screw-cutting, planing, milling, boring, drilling, chucking, use of machinist's small tools in great variety.

5. MACHINE CONSTRUCTION.

Six hours a week throughout the year.

Machine construction, combining, erecting, assembling.

Courses 1 and 2 are open to all students; course 2 to those having taken 1, course 3 to those having taken 1 and 2; course 5 to those having taken 4; course 5 for those who have taken 1, 2, 3 and 4. That is, the elective courses in shop-work are courses 1 and 2.

Shop-work is a requisite for the four years of Mechanical Engineering and those intending to apply for a degree in this course must have taken all the courses offered in it.

All instruction in Mechanical Engineering and Mechanic Arts will, for the present, be given by Professor Emory.

Metaphysics.

PROFESSOR REYNOLDS.

1. ELEMENTARY COURSE.

This course will take three hours a week through the year, and includes the elements of Psychology, Logic, deductive and inductive, and Ethics.

2. ADVANCED COURSE.

This course will require three hours a week through the year, and will include studies in Physiological and Educational Psychology, the Principles of Science, Natural Ethics and Science of Religion.

3. ELECTIVE COURSE IN MENTAL EVOLUTION.

This course will take two hours a week through the year, and will consist of studies in Mental Development, Comparative and Historical Psychology.

4. ELECTIVE COURSE IN HISTORY OF PHILOSOPHY.

Two hours a week through the year will be given to this course. The exercises will consist of the examination and discussion of the leading schools of thought, in ancient, mediæval and modern times as presented in the best works on these subjects.

The instruction in these courses will be by text-book recitations, lectures, essays and special reading. The best works on the several subjects will be used for texts and reference.

Modern Languages.

PROF. HARVEY.

1. FRENCH. Five times a week throughout the year.

Fall Term.—Whitney's or Edgren's Grammar, Super's Reader.

Winter Term.—Grammar continued, Reader continued.

Spring Term.—Grammar continued, Colomba, Picciola, or selections from modern authors.

2. FRENCH. Three times a week throughout the year.

Fall Term.—Havely's Constantin, or other selections; Grammar and exercises.

Winter Term.—Corneille's Le Cid, Racine's L'Athalie, Moliere's L'Avare begun; Grammar and Exercises.
Spring Term.—L'Avare finished; Hugo's Ruy Blas or Hernani, or other selections; Saintbury,s French Literature.

3. GERMAN. Five times a week throughout the year.
Fall Term.—Joynes-Meissner's or Van der Smissen-Fraser's Grammar and Joynes' Reader.
Winter Term.—Grammar continued, Reader continued.
Spring Term.—Grammar continued, Schiller's Jungfrau von Orleans, or Wilhelm Tell.

4. GERMAN. Three times a week throughout the year.
Fall Term.—Lessing's Mina von Barnhelrn, Uhland's Herzog Ernst; Grammar and Exercises.
Winter Term.—Goethe's Hermann and Dorothea; Freitag's Journalisten; Grammar and Exercises.
Sping Term.—Goethe's Iphigenie, Fouque's Undine, or other selections; Taylor's German Literature.

In courses 1 and 3 the classes are thoroughly drilled in the Etymological forms, and in the simple forms of Syntax. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in courses 2 and 4.

Political Science.

PRESIDENT TURNER AND PROFESSOR BROOKE.

1. POLITICAL ECONOMY.—*Elementary Course.*
Fall Term. Two hours a week. Text: Walker's Elementary Work.
PRESIDENT TURNER.

2. POLITICAL ECONOMY.—*Advanced Course.*
Two hours a week throughout the year.
Special study of problems of present interest. Text book and lectures.
PRESIDENT TURNER.
Course 1 must be taken before this course.

3. ELEMENTARY COURSE IN CIVIL GOVERNMENT.
Spring Term Two hours a weok. Text: Fiske.
Required of students in Agricultural course: Optional to others.
PRESIDENT TURNER.

4. CONSTITUTIONAL AND INTERNATIONAL LAW.
Two hours a week throughout the year.
PROF. BROOKE.
Elective for Seniors.

REQUIREMENTS FOR GRADUATION

IN THE

COLLEGIATE DEPARTMENT.

Five regular courses of study are offered in the Collegiate Department, leading to the degrees of Bachelor of Arts, Bachelor of Science, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Agriculture.

The details of the requirements for these degrees, and of the courses of study for each of them, are given on subsequent pages.

Each of these courses, except the course in Agriculture, requires four years for its completion.

Requirements for Admission.

To enter any one of these courses, the student must have completed the course of study required for that course; *provided*, that students who have not completed all the preparatory studies will be required to take first, the studies of the preparatory department in which they are deficient; and, in addition to these, they may take such studies in the collegiate courses of study as they are prepared to take under the advice of the Faculty.

The preparatory course of study will be found in the latter part of this catalogue, under the head of the Preparatory Department.

Three original literary performances are required of all candidates for Bachelor's Degrees, during each of the last two years of the course.

The Course in Arts.

This course corresponds to the usual "classical" course in most colleges. The distinctive feature of it is the study of Latin and Greek, which are both required for the degree of Bachelor of Arts. The last year of the course is almost entirely elective, enabling the student to adapt his work to his future aims in life. To enter this course the student must have completed the course of study in the preparatory department, or its equivalent, except Book-keeping.

[NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction," beginning on page 15, the description of that course will be found. Where a bracketed

and italicised title follows the name of a study the description will be found under the bracketed title. The other figures indicate the number of exercises per week].

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Latin	3.	Latin	2 or 3.	Latin	3 or 2.
[*A. Lang.* 1]		[*A. Lang.* 1]		[*A. Lang.* 1]	
Greek	2.	Greek	3 or 2.	Greek	2 or 3.
[*A. Lang.* 4]		[*A. Lang.*4]		[*A. Lang.* 4]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
Physics	3.	Physics	3.	Physics	3.
[*Chem. & Phys.* 1]		[*Chem. & Phys.* 1]		[*Chem. & Phys.* 1]	
English (1)	3.	English (1)	3.	English (1)	3.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Latin	3.	Latin	3.	Latin	3.
[*A. Lang.* 2]		[*A. Lang.* 2]		[*A. Lang.* 2]	
Greek	3.	Greek	3.	Greek (2)	3.
[*A. Lang.* 5]		[*A. Lang.* 5]		[*A. Lang.* 5]	
History	2.	History	2.	History	2.
English (2)	2.	English (2)	2.	English (2)	2.
Chemistry	3.	Chemistry	3.	Chemistry	3.
[*Chem & Phys.* 3]		[*Chem & Phys.* 3]		[*Chem. & Phys.* 3]	
Polit. Science (1)	2.	Field Botany	2.	Field Botany	2.
		[*Biology* 1]		[*Biology* 1]	

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics.	3.
[*Metaphysics* 1]		[*Metaphysics* 1]		[*Metaphysics* 1]	
Geology (1)	2.	Geology (1)	2.	Geology (1)	2
Zoology	3.	Zoology	3.	Anat. Phys. Hy.	5.
[*Biology* 3]		[*Biology* 3]		[*Biology* 4]	
English (3)	2.	English (3)	2.	English	2.

Elective.—An election is given during this year and the following year, between the Ancient Languages, Courses 3 and 6, and Modern Languages, Course 3 this year, and Course 1 or Course 4 in the Senior year.

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Metaphysics (2)	3.	Metaphysics (2)	3.	Metaphysics (2)	3.
German or French	3 or 5.	German or French	3 or 5.	German or French	3 or 5.
[*Mod. Lang.* 3 *or* 1.]		[*Mod. Lang.* 3 *or* 1.]		[*Mod. Lang.* 3 *or* 1.]	

Elective.—From the courses given below, the student must select

enough work to make with the above, fifteen hours a week throughout the year.

French	5.	Biology (5)	5.	Physics (2)	2.
German	5 or 3.	Chemistry (4)	5.	Biology (6)	2.
Latin (3)	2.	Metaphysics (3)	2.	Astronomy	2.
Greek (3)	2.	Metaphysics (4)	2.	[*Mathematics* 3.]	
English (4)	2.	Polit. Science (2)	2.		
		Polit. Science (4)	2.		

BACHELOR OF ARTS COURSE. WEEKLY SCHEDULE. FIRST YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	*Physics:* Mechanics.		*Physics.* Mechanics.		*Physics.* Mechanics.
	9½	*Greek,* Herodotus, Gr. Prose Comp.	*Greek.* Herodotus; Gr. Comp.	*Greek.* Herodotus: Gr. Comp.	*Latin.* Virgil; Comp.	*Latin.* Virgil; Comp.
	10½	*Math.* Algebra.	*Math.* Algebra.	*Math.* Geometry.	*Math.* Geometry.	
	11½		*Rhetoric.* Style, Essays.		*Rhetoric.* Style, Esssays.	*Rhetoric* Style, Essays.
WINTER.	8½	*Physics* Electricity, Magnetism, Sound.		*Physics.* Electricity, Magnetism, Sound.		*Physics.* Electricity, Magnetism, Sound.
	9½	*Greek:* The Iliad; Exercises.	*Greek.* The Iliad; Exercises.	*Greek:* The Iliad; Exercise. or *Latin,* Horace.	*Latin.* Horace, Odes; Exercises.	*Latin.* Horace, Odes; Exercises.
	10½	*Math.* Trigonometry.	*Math.* Trigonometry.	*Math* Trigonometry.	*Math.* Trigonometry.	
	11½		*English Language.*		*English Language.*	*English Language.*
SPRING.	8½	*Physics.* Heat, Light.		*Physics.* Heat, Light.		*Physics.* Heat, Light.
	9½	*Greek.* The Odyssey: Exercises.	*Greek.* The Odyssey; Exercises.	*Latin.* Cicero de Senectute. &c.: Exercises.	*Latin.* Cicero, de Senectute, &c.; Exercises.	*Latin.* Cicero de Senectute, &c.; Exercises.
	10½	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	
	11½		*English Literature.*		*English Literature.*	*English Literature.*

SECOND YEAR.

FALL.	8½	*Greek.* Xenephon's Mem. Exercises.	*Greek.* Xenephon's Mem. &c.	*Latin.* Livy: Rom. Lit.	*Latin.* Livy; Rom. Lit.	*Latin* Livy; Rom. Lit.
	9½	*History.* Ancient.	*Rhetoric.* Invention; Essays.		*Rhetoric.* Invention; Essays.	*History.* Ancient.
	10½			*Greek.* Plato's Apology.		
	11½	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Polit. Economy.*	*Polit. Economy.*
WINTER.	8½	*Greek.* Plato's Apology; Exercises.	*Greek.* Plato's Apology; Exercises	*Latin.* Horace; Satires.	*Latin.* Horace; Satires.	*Latin.* Horace; Satire.
	9½	*History.* Modern.	*Rhetoric.* Invention; Essays.		*Rhetoric.* Invention; Essays.	*History.* Modern.
	10½			*Greek.* Xenephon's Ex.		
	11½	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Field Botany.*	*Field Botany.*
SPRING.	8½	*Greek.* Euripides: Exercises.	*Greek.* Euripides.	*Latin.* Cicero de Officiis.	*Latin.* Cicero de Officiis.	*Latin.* Cicero de Officiis.
	9½	*History.* United States.	*Rhetoric.* Invention; Essays.		*Rhetoric.* Invention; Essays.	*History.* United States.
	10½			*Greek.* Euripides.		
	11½	*Chemistry.* Organic	*Chemistry.* Organic.	*Chemistry.* Organic.	*Field Botany.*	*Field Botany.*

BACHELOR OF ARTS COURSE. WEEKLY SCHEDULE. THIRD YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL AND WINTER.	8½	*Psychology & Logic.*	*Geology.* Dynam. & Hist.	*Psychologg & Logic.*	*Geology.* Dynam & Hist.	*Psychology and Logic.*
	9½	*Zoology.*		*Zoology.*		*Zoology.*
	10½		*Eng. Lit.* Special selections.		*Eng. Lit.* Selections.	
	11½	*Latin*: Jacitus; or *German* Grammar and Reader.	*Latin.* Tacitus; or *German.* Grammar and Reader.	*German.* Grammar and Reader.	*Greek.* Demos. & Soph. *German.* Grammar and Reader.	*Greek.* Demos. & Soph; or *German.* Grammar and Reader.
SPRING.	8½	*Ethics.*	*Geology.* *Anat. Phys. and Hygiene.*	*Ethics.*	*Geology.*	*Ethics.*
	9½	*Anat. Phys. and Hygiene.*		*Anat. Phys. & Hygiene.*	*Anat. Phys. & Hygiene.*	*Anat. Phys. & Hygiene.*
	10½		*Eng. Lit.* Selections.		*Eng. Lit.* Selections.	
	11½	*Latin.* Juvenal; or *German.* Grammar and Reader.	*Latin.* Juvenal; or *German.* Grammar and Reader.	*German.* Grammar and Reader.	*Greek.* Thucydides; or *German.* Grammar and Reader.	*Greek.* Thucydides: or *German.* Grammar and Reader.

FOURTH YEAR.

FALL, WINTER, AND SPRING.	8½	*German.* Selections.	*Polit. Economy.* Adv'c'd *Historical Psychology.*	*German.* Selections.	*Polit. Economy.* Adv'c'd *Historical Psychology.*	*German.* Selections.
	9½	*French.* Gram. &. Reader.	*French.* Gram. & Reader *Political Science.*	*French.* Gram. & Reader.	*French.* Gram. & Read'r *Political Science.*	*French.* Gram. & Reader.
	10½	*Anatomy, Human.* *Inter. and Const. Law.*	*Anatomy, Human.*	*Anatomy, human.* *Inter & Const. Law.*	*Anatomy, human.*	*Anatomy, human.*
	11½	METAPHYSICS.	*Science of Religion.* *Physical Geography.*	METAPHYSICS.	*Science of Relegion.* *Physical Geography.*	METAPHYSICS.
	3		*Practical Physics.* *Microscopy.*	*Anglo Saxon.*	*Practical Physics.* *Microscopy.*	*Anglo Saxon.*

The Course in Science.

This course differs from the Arts course mainly in the substitution of modern languages (French and German) for Latin and Greek, and the requirement of an additional year's study of Mathematics. The last year of this course is mainly elective. To enter this course the student must have completed the course of study in the preparatory department, or its equivalent, except Greek.

[NOTE.---The figure in parenthesis, *e. g.* (1) following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction" on preceding pages, the description of that course will be found. Where a bracketed and italicised title follows the name of the study the description will be found under the bracketed title. The other figures indicate the number of exercises per week].

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
French	5.	French	5.	French	5.
[*Mod. Lang.* 1]		[*Mod. Lang.* 1]		[*Mod Lang.* 1.]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
Physics	3.	Physics	3.	Physics	3.
[*Chem. and Phys.* 1]		[*Chem. & Phys* 1]		[*Chem. & Phys.* 1.]	
English (1)	3.	English (1)	3.	English (1)	3.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
French	3.	French	3.	French	3
[*Mod. Lang.* 2]		[*Mod Lang.* 2]		[*Mod. Lang.* 2]	
Mathematics (2)	3.	Mathematics (2)	3.	Mathematics (2)	3.
History	2.	History	2.	History	2.
English (2)	2.	English (2)	2.	English (2)	2.
Chemistry	3.	Chemistry	3.	Chemistry	3.
[*Chem. & Phys.* 3.]		[*Chem. & Phys.* 3]		[*Chem. & Phys.* 3.]	
Polit. Science (1)	2.	Botany	2.	Botany	2.
		[*Biology* 1.]		[*Biology* 1.]	

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics	3.
[*Metaphysics* 1]		[*Metaphysics* 1]		[*Metaphysics* 1]	
Geology (1)	2.	Geology (1)	2.	Geology (1)	2.
Structural Botany }	5.	Structural Bot. }	5.	Anat. Phy. & Hy.	5.
Zoology }		Zoology }		[*Biology* 4]	
[*Biology* 2, 3]		[*Biology* 2, 3]			
German	5.	German	5.	German	5.
[*Mod. Lang.* 3]		[*Mod. Lang.* 3]		[*Mod. Lang.* 3]	

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
German	3.	German	3.	German	3.
[*Mod. Lang.* 4]		[*Mod. Lang.* 4]		[*Mod. Lang.* 4]	
Metaphysics (2)	3.	Metaphysics (2)	3,	Metaphysics (2)	3.

Electives.—Each student in this course is required to select from the following list nine hours per week, throughout the year.

English (4)	2	Political Science (2)	2
Chem. and Phys. (2)	2	Political Science (4)	2
Chem. and Phys. (4)	5	Metaphysics (3)	2
Biology (6)	2	Metaphysics (4)	2
Biology (5)	5	Mathematics (3)	2
English (3)	2	Geology (3)	2
		Geology (5)	2

BACHELOR OF SCIENCE COURSE. WEEKLY SCHEDULE. FIRST YEAR.

TERMS.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	*Physics*: Mechanics.		*Physics:* Mechanics.		*Physics:* Mechanics.
	9½	*French*: Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.
	10½	*Mathematics*: Algebra.	*Mathematics:* Algebra.	*Mathematics:* Geometry.	*Mathematics:* Geometry.	
	11½		*Rhetoric:* Style, Essays.		*Rhetoric:* Style, Essays.	*Rhetoric:* Style, Essays.
WINTER.	8½	*Physics:* Electricity, Magnetism, Sound.		*Physics:* Electricity, Magnetism Sound.		*Physics*: Electricity. Magnetism. Sound.
	9½	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.
	10¼	*Mathematics:* Trigonometry.	*Mathematics:* Trigonometry.	*Mathematics:* Trigonometry.	*Mathematics:* Trigonometry.	
			English Language.		*English Language.*	*English Language.*
SPRING.	8½	*Physics:* Heat, Light.		*Physics:* Heat, Light.		*Physics:* Heat, Light.
	9½	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.	*French:* Gram. & Reader.
	10½	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	*Mathematics:* Analytical Geom.	
			English Literature.		*English Literature.*	*English Literaturs.*

SECOND YEAR.

FALL.	8½	*Mathematics:* Calculus.		*Mathematics*: Calculus.		*Mathematics*: Calculus.
	9½	*History:* Ancient.	*Rhetoric*; Invention, Essays.		*Rhetoric*: Invention, Essays.	*History*: Ancient.
	10½		*French*: Selections.	*French*: Selections.	*French*: Selections.	
	11½	*Chemistry:* Inorganic.	*Chemistry* Inorganic.	*Chemistry*: Inorganic.	*Polit. Economy.*	*Polit. Economy.*
WINTER.	8½	*Mathematics:* Calculus.		*Mathematics*: Calculus.		*Mathematics*: Calculus.
	9½	*History:* Modern.	*Rhetoric*; Invention, Essays		*Rhetoric*: Invention, Essays.	*History*: Modern.
	10½		*French*: Selections.	*French*: Selections.	*French*: Selections.	
	11½	*Chemistry:* Inorganic.	*Chemistry*: Inorganic.	*Chemistry*: Inorganic.	*Field Botany.*	*Field Botany.*
SPRING.	8½	*Mathematics:* Calculus.		*Mathematics*: Calculus.		*Mathematics*: Calculus.
	9½	*History:* United States.	*Rhetoric*: Invention, Essays.		*Rhetoric*: Invention, Essays.	*History*: United States.
	10½		*French*: Selections.	*French*: Selections.	*French*: Selections.	
	11½	*Chemistry*: Organic.	*Chemistry*: Organic.	*Chemistry*: Organic.	*Field Botany.*	*Field Botany.*

BACHELOR OF SCIENCE COURSE. WEEKLY SCHEDULE. THIRD YEAR.

TERMS.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL	8½	*Psychology and Logic.*	*Geology*: Dynam. & His.	*Psychology and Logic.*	*Geology*: Dynam. & His.	*Psychology and Logic.*
AND	9½	*Zoology.*	*Structural Botany.*	*Zoology.*	*Structural Botany.*	*Zoology.*
WINTER.	11½	*German*: Gram. & Read.	*German*: Gram. & Rdad.	*German*: Gram & Read.	*German*: Gram. & Read.	*German*: Gram & Read.
SPRING.	8½	*Ethics.*	*Geology.*	*Ethics.*	*Geology.*	*Ethics.*
	9½	*Anat., Phys. and Hygiene.*	*Anat., Phys. and Hygiene.*	*Anat., Phys. and Hygiene.*	*Anat., Phys. and Hygiene.*	*Anat., Phys. and Hygiene.*
	11½	*German*: Gram. & Read.	*German*: Gram & Read.	*German*; Gram. & Read.	*German*: Gram. & Read.	*German*: Gram. & Read.

FOURTH YEAR.

FALL,	8½	*German*: Selections.	Political Economy: Advanced Historical Psychology.	*German*: Selections.	Political Economy: Advanced. Historical Psychology.	*German*: Selections.
WINTER	9½	Analytical Chemistry.	Analytical Chemistry. Political Science.	Analytical Chemistry.	Analytical Chemistry Political Science.	Analytical Chemistry.
AND	10½	Anatomy, Human. Inter. and Const. Law.	Eng. Literature. Anatomy, Human.	Anatomy, Human. Inter. and Const. Law.	English Literature. Anatomy, Human.	Anatomy, Human.
SPRING.	11½	*Metaphysics.*	Science of Religion. Physical Geography, Astronomy.	*Metaphysics.*	Science of Religion. Physical Geography. Astronomy.	*Metaphysics.*
	3		Practical Physics. Microscopy.	Anglo-Saxon.	Practical Physics. Microscopy.	Anglo-Saxon.

Course of Study in Civil Engineering.

This course of study is comprehensive and practical, and although it has been arranged expressly for students of Civil Engineering, yet it is believed to be well adapted to the wants of others desirous of receiving that thorough discipline furnished by the careful study of the mathematical, physical and natural sciences. The course of study extends over a period of four years, and any person of requisite age, having good abilities, studious habits, and a thorough preparation can easily complete the course in the time prescribed. The degree conferred on students who satisfactorily complete the course is that of Bachelor of Science in Civil Engineering.

It should be stated that Civil Engineering is understood to include Road Engineering, Bridge Engineering, Hydraulic Engineering, Steam Engineering and Mining Engineering.

The studies of the course are designed to secure to all graduates a professional preparation, at once thorough and practical, for the following specialties of Engineering practice:

The location, construction and superintendence of public works, as railways, canals, water-works, &c.; the design, construction and management of mills, iron works, and pneumatic works; the design and construction of roofs, arch bridges, girder bridges and suspension bridges; the survey and development of mines; the design and construction of wind motors, hydraulic motors, air engines and the various kinds of steam engines; the design, construction and use of machines in general, and the determination of their efficiency; the survey of lakes, rivers and harbors and the direction of their improvement; the determination of the latitude, longitude, time and true meridian in geographical explorations or for other purposes, together with the projections of maps; the selection and tests of materials used in construction; the construction of various kinds of geometrical, topographical, isometric, and oblique projections or drawings of various structures or machines.

Lectures with full illustrations are given on most of the experimental, practical and technical courses. In other courses text-books are used in the usual manner. The practical exercises, consisting of geometrical, topographical and free hand drawing, field practice, laboratory observations, excursions in connection with the courses in geology and metallurgy, and the inspection of machines and structures, are regarded as essential parts of the course of instruction. Special tests af the transverse, compressive and tensile strength of wood, iron, steel, cements and mortars are made by the members of each class.

THESIS.

Each candidate for a degree is required to prepare and defend a thesis on some subject of immediate relation to the studies of his coorse. The thesis is required to be either a review of, or a design for a machine, structure, or process, belonging to a department of scientific or practical technics. It must be fully elaborated and accompanied by the necessary working drawings, models or other preparations requisite for the proper elucidation of the subject of the thesis. The thesis with its accompanying drawings, models, etc., are required to be deposited in the library of the University for permanent preservation.

APPARATUS, INSTRUMENTS AND MODELS.

The collection of apparatus and instruments for instruction in engineering, chemistry and physics are complete and modern. For instruction in engineering are transits, levels, compasses, aneroid barometers, clinometers, sextant, odometers, pedometers, telemeters, solar attachment, prismatic compass, hand levels, drawing instruments, blue printing outfit, and a complete set of United States standard weights and measures. The department is also supplied with a large Riehle Bros. testing machine.

ADMISSION TO THE COURSE.

All candidates for admission to the first year must have satisfactorily completed the Preparatory course of the University, or its equivalent, excepting Latin and Greek; but this shall not be construed to excuse students in the regular Preparatory department from any study in that department excepting Greek.

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FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Physics (1)	3.	Physics (1)	3.	Physics (1)	3.
French	5.	French	5.	French	5.
[*Modern Lang.* 4.]		[*Mod. Lang.* 3.]		[*Mod. Lang.* 3.]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
English (1)	3.	English (1)	3.	English (1)	3.
Freehand Drawing	2.	Freehand Draw.	2.	Freehand Draw.	2.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Mathematics (2)	3.	Mathematics (2)	3.	Mathematics (2)	3.
Geology (1)	2.	Geology (2)	2.	Geology (2)	2.
C. Engineering (1)	4.	C. Engineering (2)	4.	C. Engineering (3)	4.
French	3.	French	3.	French	3.
[*Mod. Lang.* 2.]		[*Mod. Lang.* 2.]	4	[*Mod. Lang.* 2.]	
Chemistry (3)	3.	Chemistry (3)	3.	Chemistry (3)	3.
Field Practice	4.	Field Practice	4.	Field Practice	4.

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Metaphysics (1)	3.	Metaphysics (1)	3.	Metaphysics (1)	3.
Chemistry (4)	5.	Chemistry (4)	5.	Chemistry (4)	5.
Astronomy	2.	Mathematics (3)	2.	Mathematics (3)	2.
[*Mathematics* 3]		Applied Mech.	4.	Str. of Mater'ls	4.
Rational Mechanics	5.	[*Engineering* 5]		[*Engineering* 6]	4.
[*Engineering* 4]		Field Practice	2.	Architecture.	3.
Field Practice	4.	Mineralogy	2.	[*Engineering* 7]	
		[*Geology* 3]		Field Practice	2.

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Stereotomy	2.	Geodesy	2.	*Anat., Phys. & Hg.*	5.
[*Engineering* 8]		[*Engineering* 12]		[*Biology* 4]	
Bridges & Graphics	4.	Metallurgy	3.	Specifications.	
[*Engineering* 9]		[*Engineering* 13]		Contracts.	
Railroads	4.	Hydraulics.		Original work.	
[*Engineering* 10]		[*Engineering* 14]	4.	Thesis.	
Mining	3.	Steam Engin'ring	4.	Thesis Drawing.	
[*Engineering* 11]		[*Mech. Engin'g* 4]			
Field Practice	4.	Original work.			

COURSE IN CIVIL ENGINEERING—WEEKLY SCHEDULE.

TERM	HOUR.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
FALL.	8½ 9½ 10½ 11½ P. M	Physics, M. W. Fr. French, M. T. W. Th. Fr. Mathematics, M. T. W. Th. Rhetoric, T. Th. F. Drawing, 2 hours.	} Geology, T. Th. } Calculus, M. W. Fr. Surveying, M. T. W. Th. French, T. W. Th. Chemistry, M. T. W. Field Practice, 4 hours.	Psychology, M. W. Fr. Analytical Chemistry, 5 hours. Rational Mechanics, 5 hours. Astronomy, T. Th. Field Practice, 4 hours.	Stereotomy, T. Th. Bridges and Graphics, M. T. W. Th. Railroads, M. T. W. Th. Mining, M. W. Fr. Field Practice, 4 hours.
WINTER.	8½ 9½ 10½ 11½ P. M.	Physics, M. W. Fr. French, M. T. W. Th. Fr. Trigonometry, M. T. W. Th. Eng. Lang., T. Th. Fr. Drawing, 2 hours.	Calculus, M. W. Fr. Des. Geom., } Geology, M. Fr. } French, T. W. Th. Chemistry, M. T. W. Field Practice, 4 hours.	Psychology, M. W. Fr. Analytical Chemistry, 5 hours. Applied Mathematics, M. T. W. Th. } Mineralogy, M. W. } Astronomy, T. Th. Field Practice,	} Geodesy, T. Th } Metallurgy, M. W. Fr. Hydraulics, M. T. W. Th. Steam Engine, M. T. W. Th. Original Work,
SPRING.	8½ 9½ 10½ 11½ P. M.	Physics, M. W. Fr. French, M T W. Th. Fr. Analyt Geom, M. T.. W. Th Eng. Lang., T. Th. Fr. Drawing, 2 hours.	Calculus, M. W. Fr. Trig. Surveying, M. T, W. Th. } Geology, M. Fr. } French, T. W. Th. Chemistry, M. T. W. Field Practice, 4 hours.	Ethics, M. W Fr. Analytical Chemistry, 5 hours. Applied Mechanics, M. T. W. Th. } Astronomy, T. Th. } Architecture, M. W. Fr. Field Practice, 4 hours.	Specifications, Anat., Phys. and Hy., M. T. W. Th. Fr. Laws of Contracts, Original Work, Thesis, Thesis Drawings,

Course in Mechanical Engineering and Mechanic Arts.

The Department of Mechanical Engineering and Mechanic Arts was established by the Board of Regents at its meeting in 1891, and a building provided in which to carry on the instruction in theoretical and practical work. The building is about ninety by thirty-two, two story in part, giving three large rooms or shop spaces for wood, iron, construction work and experimental investigation. It is situated on the lower plat of the campus near the river, adjacent to available water power, and is accessible by the new University road.

The object of the course in Mechanical Engineering is to graduate young men capable of entering immediately into the professional field of Mechanical Engineering to take charge of important works, to superintend, design or construct mechanical plants, to enter the engineering or manufacturing vocations, into which they shall bring a liberal education, and at the same time a technical training and knowledge.

The material equipment of the department will include laboratories of Physics and Chemistry, Libraries, Draughting and Lecture rooms provided with models and apparatus, also mechanical laboratories and workshops. These latter have sections of wood-working, equipped with benches, small tools, jig-saws, buzz-saws, planers, lathes, shapers, etc., for working woods according to the most recent methods,---sections of iron and steel forging, equipped with forges, fans, blowers, exhausters, drills, shears, small tools, etc., for the forging of iron and steel, and tool dressing,---section of chipping and filing and machinists' work, equipped with iron planers, drills, shapers, milling machines, grinders, engine lathes, benches, small tools in great variety for the working of and fitting in cast iron, wrought iron, steel and alloys,---a department or section of experimental engineering in which experiments and tests will be made of machines and apparatus already constructed and operating.

This is a four years' course leading to the Bachelor's degree, and in entering it students should bring as thorough and general knowledge as possible, with the mathematical ability to pursue with advantage this which has now become a professional branch.

ADMISSION.

Candidates for admission to the Course in Mechanical Engineering must pass satisfactory examination in English Grammar, Arithmetic, Geography, United States History, Higher Algebra, and Plane Geometry. In general, candidates must pass the entrance examinations to the University, except in Latin and Greek, or may be admitted on certificate or otherwise as provided for elsewhere in the catalogue. Although these languages are not required, those intending to enter are recommended to offer as much of them as can be acquired in the preparatory schools. The studies of the University should not be

anticipated, but a thorough knowledge of the elements acquired. The course of study covered by the Preparatory Department of the University will prepare the student for pursuing the course in Mechanical Engineering. See general requirements for admission to the University elsewhere in the catalogue.

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Physics	3.	Physics	3.	Physics	3.
[*Chem. & Phys.* 1]		[*Chem. and Phys.* 1]		*Chem. and Phys.* 1]	
French	5.	French	5.	French	5
Mod. Lang. 1]		[*Mod. Lang.* 1]		[*Mod. Lang.* 1]	
Algebra and Geom	4.	Trigonometry	4.	Analytical Geom	4.
Mathematics (1)		[*Mathematics* 1]		[*Mathematics* 1]	
English (1)	3.	English (1)		English (1)	3.
Shop Work	*3.	Shop Work	3.*	Shop-work	*3.
[*Mechanic Arts* 1]		*Mechanic Arts* 1]		[*Mechanic Arts*1]	

*Three exercises of two hours each.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Calculus	3.	Calculus	3.	Calculus	3.
[*Mathematics* 2]		[*Mathematics* 2]		[*Mathematics* 2]	
Land Surveying	4.	Descriptive Geom	4.	French	3.
[*Civil Engin.* 1]		[*Civil Engin.* 2]		[*Mod. Lang.* 2]	
French	3.	French	3.	Chemistry	3.
[*Mod. Lang.* 2]		[*Mod. Lang.* 2]		[*Chem and Phys* .3.]	
Chemistry	3.	Chemistry	3.	Free-hand Draw.	2.
[*Chem. and Phys.* 3]		[*Chem. and Phys* 3]		Mechanical Draw.	4.
Free-hand Draw.	2.	Free-hand Draw.	2.	[*Mechan Engin.* 1]	
Shop-work	*3.	Shop-work	3.*	Shop-work	*3.
[*Mechanic Arts* 2]		[*Mechanic Arts* 2]		[*Mechanic Arts* 2]	

*Three exercises of two hours each.

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Geology (1)	2.	Geology (1)	2.	Geology (1)	2.
Mechanical Draw.	4.	Mechan. Draw.	2.	Mechanical Draw.	2.
[*Mechan. Engin.* 2]		[*Mechan. Engin.* 2]		[*Mechan. Engin.* 2]	
English	2.	English	2.	English	2.
Theoretical Mech.	5.	Applied Mechan.	4.	Applied Mechan.	4.
[*Civil Engin.* 4]		[*Civil Engin.* 5]		[*Civil Engin.* 6]	
German	5.	German	5.	German	5.
[*Mod. Lang.* 3]		[*Mod Lang.* 3]		[*Mod. Lang.* 3]	
Shop-work	3.*	Shop-work	3.*	Shop-work	*3.
[*Mechanic Arts* 3]		[*Mechanic Arts* 4]		[*Mechanic Arts* 4.]	

*Three exercises of two hours each.

FOURTH YEAR.

Fall Term.	*Winter Term.*	*Spring Term.*
Psychology	Logic	Ethics
German	German	German
Bridges & Graphics	Metallurgy	Polit. Economy
Mineralogy	Hydraulics	Mechan. Laboratory
Machine Design	Thermodynamics	[*Mechan. Eng.*]
[*Mechan Eng.* 3]	[*Mechan. Engin.* 4]	Law of Contracts.
Shop-work	Steam Engin.	Thesis Drawing (3)
[*Mechanic Arts* 5]	[*Mechan. Eng.* 4]	Thesis
	Mechan. Eng. (5)	Shop-work
	[*Mechanic Arts* 5]	[*Mechanic Arts*]

NONE---The course for the fourth year is subject to change.

COURSE IN MECHANICAL ENGINEERING.—WEEKLY SCHEDULE.

TERM.	HOUR.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
FALL.	8:30	Physics, M. W. Fr.	Calculus, M. W. Fr.	Geology, T. Th. Mechanical Drawing, M. W.	Psychology,
	9:30	French, M. T. W. Th. Fr.	Land Surveying, M. T. W. Th.	Rhetoric, T. Th. Mechanical Drawing, M. W.	German, M. W. Fr.
	10:30	Solid Geom.	French, T. W. Th.	Theoretical Mech., M. T. W. Th. Fr.	Bridges and Graphics, T. W. Th.
	11:20	Advanced Algebra, M. T. W. Th. Rhetoric, T. Th. Fr.	Chemistry, M. T. W. Freeland Draw. T. Th.	German, M. T. W. Th. Fr.	Machine Design, M. W. Mineralogy, T. Th.
	1–4	Shop-word, M. T.	Shop-work, Fr. 9½ to 12½, 1½ to 4½	Shop-work, W. Th.	Shop-work, Fr. 1 5 Sat. 8½–11½
WINTER.	8:30	Physics, M. W. Fr.	Calculus, M. W. Fr.	Geolygy, T. Th. Mechanical Drawing, M. W.	Logic,
	9:30	French, M. T. W. Th. Fr.	Desc'pt'e Geometry, M. T. W. Th.	Rhetoric. T. Th. Mechanical Drawing, M. W.	German, M. W. Fr.
	10:30	Trigonometry, M. T. W. Th.	French, T. W. T.	Applied Mechanics, M. T. W. Th.	Metallurgy, M. W. Fr.
	11:30	English Language, T. Th. Fr.	Chemistry, M. T. W. Freehand Drawing, T, Th.	German. M. T. W. Th. Fr.	Hydraulics, M. T. Th. Thermodynamics.
	1–4	Shop-work, M. T.	Shop-work, Fr. 9½ to 12½, 1½ to 4½	Shop-work, W. Th.	Steam Engineering, M. T. W. Th. Machine Design, T. Th. Mechanical Laboratory, Fr. 1-5, Saturday, 8½–11½.
SPRING.	8:30	Physics, M. W. Fr.	Mechanical Drawing, T. Th.	Geology, T. Th. Mechanical Drawing, M. W.	Ethics.
	9:30	French, M. Th. Th. Fr.	Calculus, M. W. Fr.	Rhetoric. T. Th. Mechanical Drawing, M. W.	German. M. W. Fr.
	10:30	Analytical Geometry, M. Th. Fr.	Mechanical Drawing, T. Th.	Strn'th of Mate'r'ls, M. T. W. Th.	Mechanical Laboratory,
	11:30	English Literature, T. Th. Fr.	French, T. W. Th hemistry, M. T. W.	German, M. T. W. Th. Fr.	Anatomy, &c. 5 hours. Law of Contracts.
	1–4	Shop-work. M. T.	Shop-work, Fr. 9½ to 11½, 1½ to 4½	Shop-work, W. Th.	Thesis Drawing. Thesis.

The Course in Agriculture

Is designed to give a thorough, liberal and practical education in agriculture and similar sciences, in order to fit the student as fully as possible for the vocation of farming, and for the duties of citizenship. The full course of study requisite for graduation covers a period of three years.

REQUIREMENTS FOR ADMISSION.

Candidates for admission to the course in Agriculture, must be able to pass a satisfactory examination in English Grammar, Arithmetic, Geography, United States History and Elementary Algebra.

Students who complete the full three years' course of study, receive the degree of Bachelor of Agriculture.

[NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction," beginning on page 15, the description of that course will be found. Where a bracketed and italicized title follows the name of a study, the description will be found under the bracketed title. The other figures indicate the number of exercises per week.]

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Algebra & Geometry	4.	Algebra & Geometry	4.	Algebra & Geometry	2.
Book-Keeping	3.	Book-Keeping	3.	Book-Keeping	3.
English	1.	English	1.	English	1.
Chemistry (3)	3.	Chemistry (3)	3.	Chemistry (3)	3.
Polit. Economy (1)	2.	Botany	2	Botany	2.
Agriculture (1)	2.	[*Biology* 1.]		[*Biology* 1.]	
		Agriculture (1)	2.	Agriculture (1)	2.

[NOTE.—The above studies not followed by figures in parenthesis are part of the second year studies of the Preparatory Department, and will be found in that list on subsequent page.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Physics	3.	Physics.	3.	Physics	3.
[*Chem. & Phys.* 1.]		[*Chem. & Phys.* 1.]		[*Chem. & Phys.* 1.]	
Zoology	3.	Zoology	3.	Anat., Phys. & Hy.	5.
[*Biology* 3:]		[*Biology* 3.]		[*Biology* 3]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
English (1)	3.	English (1)	3.	English (1)	3.
Agriculture (2)	2.	Agriculture (2)	2.	Agriculture (2)	2.

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Agriculture (3)	2.	Agriculture (3)	4.	Agriculture (3)	4.
Civil Engineeri'g (1)	4.	History	2.	History	2.
Metaphysics (1)	3.	Metaphysics (1)	3.	Metaphysics (1)	3.
Geology (1)	2.	Geology (1)	2.	Geology (1)	2.
English (3)	2.	English (3)	2.	English (3)	2.
Phys. Geography	2.	Phys. Geography	2.	Phys. Geography	2.
[*Geology* 5.]		[*Geology* 5.]		[*Geology* 5.]	

ONE YEAR COURSE IN AGRICULTURE.

The purely agricultural studies in the Agricultural Course are so arranged that students who wish to devote one year to the study of technical agricultural subjects, may have the opportunity. In addition to a full course of lectures, the following text-books and class-room work will be required:

Fall Term.		*Winter Term.*		*Spring Term.*	
Element. Agriculture	2.	Farm Economy	2.	Farm Law & Acct's	2.
Book-keeping	3.	Stock Breeding }	5.	Horticulture	2.
Chemistry	3.	Stock Feeding }		Senior Agriculture	2.
Science of Agriculture	2.	Book-Keeping	3.	Farm Appliances	2.
Senior Agriculture	2.	Chemistry	3.	Book-Keeping	3.
Political Economy	2.	Botany	2.	Chemistry	2.
		Senior Agric'lture	2.	Botany	2.

This course leads to no degree, and all applicants over fifteen years of age will be admitted without examination.

A SHORT WINTER COURSE

in Agriculture will begin, covering a period of three months, or the University Winter Term, on the first Wednesday in January. All applicants over fifteen years of age will be admitted to this course without examination. Text-book and class-room instruction will be given in Farm Economy, Stock Breeding, Stock Feeding, Farm Appliances, Farm Law and Farm Accounts. A set of lectures on technical agricultural subjects will be given during this term on Farm Management, Drainage, Road-making, Dairying, Horticulture, Agricultural Chemistry, Agricultural Science, Entimology, &c. These lectures are designed for those whose time for the study of these subjects is limited to a single winter. It is the purpose to give as much thoroughly useful information on these subjects as the limited time will allow.

MANUAL TRAINING.

All students in the Agricultural courses will be required to take a course in manual training in the shops of the Mechanical Department, sufficient to receive a practical knowledge of working in wood and iron.

BACHELOR OF AGRICULTURE—WEEKLY SCHEDULE. FIRST YEAR

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½		Algebra.		Algebra.	
	9½	Book-keeping.	Elementary Agriculture.	Book-keeping.	Elementary Agriculture.	Book-keeping.
	10½	Geometry.		Geometry.		English Composition.
	11½	Chemistry.	Chemistry.	Chemistry.	Polit. Economy.	Polit. Economy.
WINTER AND SPRING.	8½		Algebra.		Algebra.	
	9½	Book-keeping.	Farm Economy and Law.	Book-keeping.	Farm Economy and Law.	Book-keeping.
	10½	Geometry.		Geometry.		English Composition.
	11½	Chemistry.	Chemistry.	Chemistry.	Botany.	Botany.

SECOND YEAR.

FALL.	8½	Physics.	Agricultural Science.	Physics.	Agricultural Science.	Physics.
	9½	Zoology.		Zoology.		Zoology.
	10½	Algebra.	Geometry.	Algebra.	Geometry.	
	11½		English.		English	English.
WINTER.	8½	Physics.	Stock Breeding.	Physics.	Stock Breeding.	Physics.
	9½	Zoology.		Zoology.		Zoology.
	10½	Trigonometry.	Trigonometry.	Trigonometry.	Trigonometry.	
	11½		English.		English.	English.
SPRING.	8½	Physics.	Horticulture.	Physics.	Horticulture.	Physics.
	9½	Anat. Phys. and Hy.	Anat., Phys. and Hy.	Anat., Phys. and Hy.	Anat., Phys. and Hy.	Anat., Phys. and Hy.
	10½	Civil Government.		Civil Government.		
	11½		English.		English.	English.

THIRD YEAR.

FALL.	9½	Psychology.	Geology.	Psychology.	Geology.	Psychology.
	8½	Surveying.	Surveying.	Surveying.	Surveying.	
	10½	Agriculture.	English Literature.		English Literature.	Agriculture.
	11½		Phys. Geography.		Phys. Geography.	
WINTER.	8½	Logic.	Geology.	Logic.	Geology.	Logic.
	9½	Mod. History.				Mod. History.
	10½	Agriculture.	English Literature.	Agriculture.	English Literature.	
	11½		Phys. Geography.	Stock Feeding.	Phys. Geography.	Stock Feeding.
SPRING.	8½	Ethics.	Geology.	Ethics.	Geology.	Ethics.
	9½	U. S. History.				U. S. History.
	10½	Agriculture.	English Literature.	Agriculture.	English Literature.	
	11½		Phys. Geography.	Farm Appliances.	Phys. Geography.	Farm Appliances.

Post-Graduate Courses.

MASTER OF ARTS.

The degree of Master of Arts will hereafter be given to Bachelors of Arts, who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the conrse.

MASTER OF SCIENCES.

The degree of Master of Sciences will hereafter be given to Bachelors of Sciences who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

Degrees Conferred June 10. 1891.

Bachelor of Arts: Arthur P. Cooper, J. Ewing Davis, Harriet E. Lyon, James R. Trotter, Charles L. White, DeWitt White, Prescott C. White.

Bachelor of Sciences: Charles R. Duvall, James E. Galford, Ulysses S. G. Hayes, Melville D. Post.

Civil Engineer: Cassius McC. Lemley, Tillman D. Lynch, Florian G. Ross.

Bachelor of Laws: Benjamin F. Bailey, S. E. Boggess, Lynn Brannon, James E. Brown, Wilson L. Camden, Frank W. Clark, L. J. Cobun, Thomas I. Cummings, J. Ewing Davis, James E. Dawson, W. E. Hines, R. E. L. Hutchinson, C. E. Morris, E. H. Morton, W. S. O'Brien, C. B. Riggle, J. B. Settle, C. R. Sommerfield.

HONORARY DEGREES.

Doctor of Laws: Hon. A. B. Fleming, Governor of West Virginia.

Doctor of Divinity: Rev. James H. Boyd, Rev. Jas. H. Flanagan, Rev. Benjamin Ison, Rev. R. S. Waterhouse.

Doctor of Philosophy: John L. Gilpatrick.

Master of Arts: J. Walter Barnes, J. F. Ogden.

THE LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the students a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department. By recent act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law, Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleading and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Notes on Common Law Pleading and Practice in West Virginia by Professor Brooke, Williams on Real Property, and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature.

The text-books will be supplemented by lectures each day, and it will be the endeavor so to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-books used in Constitutional Law are the "Federalist" and Cooley's Constitutional Law. This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States, interpreting its provisions, is also the subject of lectures.

The text-book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, Barton, Addison, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence;

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the laws relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

TERMS AND TOPICS.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the Academic Department in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture and preparation for the course.

THE TWO YEARS COURSE.

When dividing the course into two years, the first year will inlcude Blackstone's Commentaries and the Statute law of the State—lectures three times a week—together with Commercial Law three times a week in Fall and Spring terms; to which may be added, if the student is competent, Constitutional or International Law.

As one term is not much dependent upon another, as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall Term if possible.

The work of the year is divided among the three terms as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings.	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleading. Evidence.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2 books (continued). Blackstone, 3d and 4th books (begun).	PROF. BROOKE.
Agency. Partnership. Surety and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued). Criminal Law, &c., Blackstone, 3d and 4th books (continued). Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

METHODS OF INSTRUCTION.

The methods of instruction consist of Lectures and Examinations, from approved text books read in course; the drawing of the various legal papers requisite in the ordinary pratice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing.

MOOT COURTS.

However familiar the student may be with the text-books and with the principles and theories of law in all itsibranches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleading, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot Court is organized and conducted in strict comformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

REQUIRMENTS FOR ADMISSION AND DEGREES.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after exami-

nation, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English branches will be held by two law Professors and the President of the University, of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies. The examination will include the correct writing of ordinary English.

The qualifications of a student for receiving the degree of Bachelor of Laws is not measured by the time he has spent in completing the course, whether that be one year, or two years, or many years. But the sole test of his title to the degree is his ability to successfully pass a rigid examination on the whole course, and thus demonstrate that he is worthy of it. The value of a diploma from this department will not be impaired by conferring it where it is not merited. Time, therefore, is not made a test in any case, except that a student must have been in attendance upon the lectures at least one scholastic year before he will be admitted to the examination for a degree. If he fails to reach the standard in his first examination, he may apply for another examination one year thereafter, whether he has continued in attendance at the University or not.

EXPENSES.

The tuition fee in the Law Department is $8.00 per term.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

The summary of the expenses of boarding, &c., given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

COST OF BOOKS.

The text-books essential to the successful prosecution of the work of the law school are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Starkie on Evidence, Smith's Mercantile Law, Adams' Equity, The Fœderalist, Woolsey's International Law.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second hand" at from $12.00 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

ADVANTAGES OF A UNIVERSITY LAW COURSE.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be

over-estimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

WEEKLY SCHEDULE OF LAW LECTURES.

HRS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8½	Blackstone Prof. Brooke. Evidence. Prof. Willey.	Pleading. Prof. Brooke.	Blackstone. Prof. Brooke.	Pleading. Prof. Brooke.	Blackstone. Prof. Brooke.	Pleading. Prof. Willey
9½			Commercial Law. Prof. Willey.			
10		Commercial Law. Prof. Willey.		Commercial Law. Prof. Willey.		
10½	Inter & Const Law. Prof. Brooke.		Inter & Const Law. Prof. Brooke.		Equity Jurisp. Prof. Willey.	

THE MILITARY DEPARTMENT.

APPOINTMENT OF CADETS.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The commandant of cadets, or the President will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts—the names of the Regents are prefixed to this catalogue.

District	I.	Hancock, Brooke, Ohio.
District	II.	Marshall, Wetzel, Marion.
District	III.	Ritchie, Doddridge, Harrison, Tyler.
District	IV.	Pleasants, Wood, Wirt, Gilmer, Calhoun.
District	V.	Mason, Jackson, Roane.
District	VI.	Putnam, Cabell, Wayne.
District	VII.	Lincoln, Logan, Wyoming, McDowell, Mercer, Raleigh.
District	VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District	IX.	Kanawha, Clay, Nicholas, Braxton, Boone.
District	X.	Lewis, Randolph, Upshur, Barbour, Webster.
District	XI.	Preston, Monongalia, Taylor.
District	XII.	Hampshire, Hardy, Grant, Mineral, Pendleton, Tucker.
District	XIII.	Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps for the benefit of drill and exercise.

UNIFORM.

Upon occasions of military ceremony, drills, etc., cadets are required to appear in uniform. This uniform is of gray cloth and consists of a blouse, trousers and cap, costing complete about $20.

RESIGNATION AND DISCHARGE.

Cadets who do not expect to return to the corps, in September, should send their resignations to the Commandant or to the President about

August 15th. Those who do not intend to return and fail to send this notice, prevent some one from obtaining an appointment. It is but justice to others that their intention to stay away should be known as soon as possible.

Cadets, who, expecting to return, find themselves unable to report on the first day of the Fall term, should state their reasons in writing to the Commandant or to the President before the first day of the term, and ask for leave of absence to cover the time they will be necessarily absent.

All cadets who fail to report on the first day of the Fall term, and who have not obtained leave of absence, will be discharged and the Regent notified of the vacancy.

Course of Instruction.

LIEUT. RAMSEY, U. S. A.

1. FOR CADETS IN THEIR FIRST YEAR OF SERVICE:
   - *a.* Practical instruction in infantry drill regulations, including school of the soldier, school of the company, school of the battalion, skirmishing and ceremonies.
   - *b.* Practical instruction in guard duties.

2. FOR CADETS IN THEIR SECOND YEAR OF SERVICE:
   - *a.* Infantry drill regulation same as first year.
   - *b.* Practical instruction in artillery drill regulations, including the formation of detachments, manual of the piece, mechanical maneuvers, aiming drill, saber exercise and target practice.
   - *c* Practical instruction in guard duty.

3. FOR CADETS IN THEIR THIRD YEAR OF SERVICE:
   - *a.* Infantry drill regulations same as first year.
   - *b.* Theoretical instruction in infantry drill regulations.
   - *c.* Practical and theoretical instruction in small arms firing.
   - *d.* Practical and theoretical instruction in military signalling.
   - *e.* Practical instruction in guard duty.

4. FOR CADETS WITH MORE THAN THREE YEARS SERVICE:
   - *a.* Practical instruction in infantry drill regulations, excluding school of the soldier.
   - *b.* Theoretical instruction in artillery drill regulations.
   - *c.* The preparation of military reports and returns.
   - *e.* Lectures upon the organization and administration of the United States army.
   - *f.* Lectures upon the elementary principles governing in the art of war and the study of important battles and campaigns.
   - *g.* Theoretical and practical instruction in guard duty.

NOTE.—The new "drill regulations" of the U. S. Army have been adopted in place of Upton's Tactics.

The University has an ample equipment for both infantry and artillery and is supplied with amunition by the Ordnance Department, U. S. Army.

The officers and non-commissioned officers are required to exercise the command and to perform the duties of the offices as in the Regular Army. It is believed that such training will improve the young men physically and prepare them to be of great use to their country in case of need.

ROSTER OF OFFICERS.

Commandant of Cadets,

Frank De W. Ramsey, 1st Lieut. 14th U. S. Infantry.

Surgeon,

Professor J. W. Hartigan, M. D.

Cadet Captains.

1 J. W. Francis.....Company A
2 C. C. Coffman.....Company B
3 C. W. Gore.....Company C

Cadet First Lieutenants.

1 C. B. Sisler.....Quartermaster
2 W. C. Meyer.....Adjutant.
3 G. M. Alexander.....Company B
4 A. B. Smith.....Company C
5 G. M. Ford.....Company A

Cadet Second Lieutenants.

1 H. W. Smith.....Company B
2 J.T. Holbert.....Company C
3 E. C. Garlow.....Company A

Cadet Sergeant Major.

C. E. Vance.....Non-commissioned Staff

Cadet Quartermaster Sergeant.

L. M. Jaco.....Non-commissioned Staff

Cadet Principal Musician.

F. M. Minshall.....Non-Commissioned Staff.

Cadet First Sergeants.

1 R. H. Ramsay.....Company B
2 E. T. Hartman.....Company A
3 M. Babb.....Company C

Cadet Sergeants.

1 J. W. Wiles.....Company A
2 G. E. Singleton.....Company B
3 J. W. Paul.....Company B
4 K. White.....Company C
5 C. M. Bennett.....Company A
6 W. A. Burdett.....Company C
7 W. D. N. Rogers.....Company C
8 B. Davenport.....Company A
9 J. L. Henderson.....Company B

Cadet Corporals.

1 J. Nuzum.....Company A
2 C. E. Carrigan.....Company B
3 G. Hogg.....Company B
4 J. M. Moore.....Company C
5 H. A. Oesterling.....Company C
6 J. W. Hughes.....Company A
7 R. P. Duvall.....Company B
8 C. P. Hood.....Company B
9 A. Warman.....Company C
10 J. Dudding.....Company C
11 A. E. Boyd.....Company A
12 W. G. Swaney.....Company A

GENERAL ROSTER OF STATE CADETS.

DISTRICT I.—*J. B. Somerville, Regent.*

	Name.	*County.*	*When Enlisted.*	*Company.*
1	Meyer, W. C	Hancock	Aug. 31, 1887	Staff
2	Bambrick, G. L	Hancock	Sept. 10, 1890	B
3	Henretta, W. H	Brooke	Sept. 28, 1891	C
4	Swaney, W. G	Hancock	Sept. 30, 1891	A

Loss.

1 Morris, C. E., discharged October 8, 1891.
2 Martin, A. K., resigned Nov. 2. 1891.
3 Downing, T. F., resigned Dec. 7, 1891.

DISTRICT II.—*Clarence L. Smith, Regent.*

1	Francis, J. W	Marshall	Sept. 13, 1886	A
2	Holbert, J. T	Marion	Sept. 4, 1888	C
3	White, K	Marshall	Sept. 5, 1888	C
4	Carrigan, C. E	Marshall	Sept. 4, 1889	B
5	Thomas, W. M	Marion	Sept. 12, 1890	C
6	Krebs, C. E	Wetzel	Sept. 10, 1890	A
7	Joliff, C. F	Wetzel	Feb. 29, 1892	B

Loss.

1 Lemley, C. Mc., graduated June 10, 1891.
2 Bennett, C. J. C., resigned March 14, 1892.
3 Hanshaw, J. E., discharged Jan. 25, 1892.

DISTRICT III.—*J. C. Vance, Regent.*

1	Smith, H. W	Tyler	March 8, 1887	B
2	Coffman, C. C	Harrison	Oct. 18, 1887	B
3	Vance, C E	Harrison	Dec. 4, 1888	Staff
4	Hughes, J. W	Doddridge	Sept. 10, 1890	A
5	Hood, C. P	Harrison	Sept. 10, 1890	B
6	Standiford, W. R.	Harrison	Sept. 28, 1891	B
7	Moore, B G	Tyler	Sept. 30, 1891	B

Loss.

1 Post, M. D., graduated June 10, 1891.
2 Lynch, T. D., graduated June 10, 1891.
3 Pearcy, C. S., transferred to Fourth District .

DISTRICT IV.—*Peregrin Hays, Regent.*

	Name.	*County.*	*When Enlisted.*	*Company.*
1	Pearcy, C. S	Gilmer	Sept. 10, 1890	C
2	Pearcy, E	Gilmer	Sept. 10, 1890	C
3	Barnett, O	Wood	Sept. 10, 1890	A
4	Steed, H. A	Wirt	Sept. 10, 1890	B
5	Bumgarner, O H	Wirt	Sept. 28, 1891	B
6	Bumgarner, Z. H	Wirt	Sept. 28, 1891	B
7	Leonard, W. C	Wood	Nov. 30, 1891	C

Loss.

1 Cooper, A. B., graduated June 10, 1891.
2 Smith, H. W., transferred to Third District.
3 Grier, J. A., discharged December 17, 1891.
4 Leonard, W. C., discharged November 2, 1891.

DISTRICT V.—*John G. Schilling, Regent.*

1	Ramsay, R. H	Jackson	Sept. 19, 1888	B
2	Gore, C. W	Mason	Sept. 19, 1888	C
3	Moore, J M	Mason	Sept. 4, 1889	C
4	Nuzum, J	Jackson	Sept. 12, 1890	A
5	Chambers, B. W	Roane	April 7, 1891	A
6	Chambers, O. J	Roane	April 7, 1891	B
7	Simmons, H. J	Roane	April 9, 1891	B
8	Roseberry, A. H	Mason	Sept. 28, 1891	A

Loss.

1 Vance, C. E., transferred to Third District.

DISTRICT VI.—*Edward A. Bennett, Regent.*

1	Burdette. W. A	Cabell	Nov. 26, 1888	C
2	Dudding, J	Putnam	Sept. 10, 1890.	C
3	Johnson, T. C.	Cabell	Sept. 10, 1890	B
4	Duncan, H. C	Wayne	Jan. 14, 1891	C

Loss.

1 Peters. S. V., resigned March 14. 1892.
2 Fry, C. G., discharged Jan. 25, 1892.
3 Morris, G. L., resigned Jan. 25 1892.

DISTRICT VII.—*Wirt A. French, Regent.*

1	Jaco, L. M.	Lincoln	Oct. 15, 1887	Staff
2	Paul, J. W	Mercer	Jan. 23, 1888	B
3	Bennett, C. M	Raleigh	Sept. 4, 1889	A
4	Herndon, I. C	Mercer	Sept. 12, 1890	B
5	McCreery, H. L.	Raleigh	Sept. 28, 1891	C
6	Perry, M	Logan	Sept. 28, 1891	A
7	French, G. H	Mercer	Oct. 1. 1891	A

DISTRICT VIII.—*M. J. Kester, Regent.*

	Name.	*County.*	*When Enlisted.*	*Company.*
1	Ford, G. M.	Monroe	Jan. 30, 1888	A
2	Hogg, G.	Fayette	Sept. 4, 1889	B
3	Jones, C. R	Summers	Sept. 10, 1890	C
4	Hartley, A. C.	Pocahontas	Sept. 10, 1890	A
5	Kittle, L.	Monroe	Sept. 30, 1891	B
6	Williams, T. M	Greenbrier	Sept. 30, 1891	A
7	Leps, H. M	Greenbrier	Nov. 11, 1891	A

Loss.

1 Vance, J. C., resigned Nov. 2, 1891.
2 McEldowney, S. B., discharged Oct. 8, 1891.
3 McWhorter, J. C. S., resigned Nov. 30, 1891.
4 Kittle, L., discharged November 5, 1891.

DISTRICT IX.—*James F. Brown, Regent.*

1	Singleton, G. E.	Braxton,	Sept. 4, 1888	B
2	Allen, W. H.	Kanawha,	Sept. 10, 1890	B
3	Kinkaid, D. B.	Nicholas,	Sept. 10, 1890	C

Loss.

1 Trotter, J. R., graduated June 10, 1891.
2 Donaldson, G., resigned March 14, 1892.

DISTRICT X.—*Thomas J. Farnsworth, Regent.*

1	Edmiston, M. A.	Lewis.	Sept. 10, 1990	B
2	Kunst, G. H. A.	Barbour	Sept. 24, 1890	A
3	Ward, J. E.	Randolph.	Sept. 28, 1891	C
4	Crouch, J. W.	Randolph.	Sept. 28, 1891	B
5	Poe, C. J.	Upshur.	Sept. 28. 1891	B
6	Rowan, F.	Randolph.	Sept. 30, 1891	C
7	Knutti, J. G.	Randolph.	Oct. 12, 1891	A

Loss.

1 Hayes, U. S. G., graduated June 10, 1891.
2 Thayer, A. L., discharged October 8. 1891.
3 Kitson. G. H., discharged October 8, 1891.
4 Greynolds, L. discharged Jan. 18, 1892.
5 McWhorter, J. C. S., transferred to Eighth District.

DISTRICT XI.—*Joseph Moreland, Regent.*

1	Wiles, J. W.	Preston	Sept. 8, 1887	A
2	Garlow, E. C.	Monongalia	Nov. 4, 1887	A
3	Alexander, G. M.	Monongalia.	Sept. 30, 1887	C
4	Henderson, J. L.	Monongalia	Sept. 7, 1888	B
5	Warman, A.	Monongalia.	Sept. 4, 1889	C
9	Hartman, E. T.	Preston	Nov. 26, 1889	A
7	Ridgway, C. N.	Monongalia	Sept. 10, 1890	B

Loss.

1 Ellis, J. R., resigned Feb. 1, 1892.

DISTRICT XII.—*John A. Robinson, Regent.*

1	Minshall, F. M.	Mineral	Aug. 31, 1887	Staff
2	Babb, M.	Grant	Sept. 4, 1889	C
3	Daily, R. W.	Hampshire	Sept. 28, 1890	B
4	Haught, O. L.	Hardy	Dec. 10, 1891	C

Loss.

1 Yost, L. N. resigned Jan. 6, 1892.

DISTRICT XIII.—*W. W. Brown, Regent.*

1	Sisler, C. B.	Morgan	Sept. 1, 1886	Staff
2	Davenport, B.	Jefferson	Sept. 4, 1889	A
3	Johnson, G. W.	Jefferson	Sept. 10, 1890	A
4	Thomas, A. R.	Jefferson	Sept. 28, 1891	A
5	Manning, F. J. Jr.	Jefferson	Sept. 28, 1891	C
6	Ross, C. W.	Berkeley	Sept. 30, 1891	C
7	Lemon, J. S.	Berkeley	Oct. 5, 1891	C

Loss.

1 Duvall, C. R., graduated June 10, 1891.
2. Miller, R. S., discharged, Oct. 8, 1891.

Volunteer Cadets.

1	Smith, A. B.	Fayette, Co., Pa.	Sept. 10, 1888	C
2	Rogers, W. D. N.	Scottdale, Pa	Sept. 4, 1889	C
3	Oesterling, H. A.	Wheeling	Sept. 18, 1889	C
4	Duvall, R. P	Jordan's Springs, Va.	Sept. 10, 1890	B
5	Boyd, S. P	Uniontown, Pa	Sept. 10, 1890	B
6	Johnson, J. M	Long Reach	Sept. 10, 1890	A
7	Boyd, A. C	Uniontown, Pa	Sept. 10, 1890	A
8	McWhorter, J. C.	Upshur Co	Jan. 7, 1891	C
9	Hale, J. C	Elizabeth	Sept. 28, 1891	B
10	Williams, A. D.	Uniontown, Pa.	Sept. 28, 1891	A
11	Hill, J. E	Fredericktown, Pa.	Sept. 28, 1891	C
12	Hustead, F. J	Fayette Co., Pa	Sept. 28, 1891	C
13	Collins, J. H	Uniontown, Pa	Sept. 28, 1891	A
14	Stewart, W. J	New York, N. Y	Sept. 28, 1891	C
15	Link, W. S	Jefferson Co	Oct. 1, 1891	B
16	Duncan, W. G.	Uniontown, Pa	Oct. 12, 1891	A
17	Cooper, J. T	Parkersburg	Feb. 29, 1892	A
18	Thompson, C. C.	Wetzel Co	March 1, 1892	C

Loss.

1 Ross, F. G., graduated June 10, 1891.
2 Corpening, W. J., discharged Oct. 6, 1891.
3 Schoonmaker, R. D., discharged Oct. 8, 1891.
4 Schoonmaker, G. F., discharged March 14, 1892.
5 Long, J. J., discharged March 14, 1892.
6 Hutton, N. B., resigned Jan. 6, 1892.
7 Link, C. W., resigned Jan. 18, 1892.
8 Hill, L. C., resigned Jan. 25, 1892.
9 Yost, L. N., transferred to Twelfth District.
10 Crouch, J. W., transferred to Tenth District.
11 Hanshaw, J. E., transferred to Second District.
12 Leps, H. M., transferred to Eighth District.
13 Ward, J. E., transferred to Tenth District.
14 Pearcy, E., transferred to Fourth District.

Changes and Casualties Since Last Catalogue.

Graduated (8).

1 Cooper, A. B., June 10, 1891.
2 Duvall, C. R., June 10, 1891.
3 Hayes, U. S. G., June 10, 1891.
4 Lemly, C. McC., June 10, 1891.
5 *Lynch, T. D. 2, June 10, 1891.
6 *Post, M. D. 3, June 10, 1891.
7 *Ross, F. G. 1, June 10, 1891.
8 Trotter, J. R., June 10, 1891.

*The names of these cadets in the order of numbers assigned were published in the Official Register of the U. S. Army as standing highest in the Military Department last commencement.

Discharged (15).

1 Corpening, W. J., October 6, 1891.
2 Thayer, A. L., October 8, 1891.
3 Morris, C. E., Ohtoher 8, 1891.
4 Miller, R. S., October 8, 1891.
5 Kitson, G. H., October 9, 1891.
6 McEldowney, S. B., October 8, 1891.
7 Schoonmaker, S. D., October 8, 1891.
8 Leonard, W. C., November 2, 1891.
9 Kittle, L., November 5, 1891.
10 Grier, J. A., December 17, 1891.
11 Greynolds, L., January 18, 1892.
12 Hanshaw, J. E., January 25, 1892.
13 Fry, C. G., January 25, 1892.
14 Long, J. J., March 14, 1892.
15 Schoonmaker, G. F., March 14, 1892.

Resigned (13).

1 Martin, A. K., November 2, 1891.
2 Vance, J. C., November 2, 1891.
3 McWhorter, J. C. S., November 30, 1891.
4 Downing, T. F., December 7, 1891.
5 Hutton, N. B., January 6, 1892.
6 Yost, L. N., January 6, 1892.
7 Link, C. W., January 18, 1892.
8 Morris, G. L., January 25, 1892.
9 Hill, L. C., January 25, 1892.
10 Ellis, J. R., February 1, 1892.
11 Peters, S. V., March 13, 1892.
12 Donaldson, G. March 13, 1892.
13 Bennett, C. J. C., March 13, 1892.

Transfers.

Pearcy, C., from Third to Fourth District.
Smith, H. W., from Fourth to Third District.
Vance, C. E., from Fifth to Third District.
McWhorter, J. C. S., from Tenth to Eighth District.
Yost, L. N., from Volunteer to Twelfth District.
Crouch, J. W., from Volunteer to Tenth District.
Hanshaw, J. E., from Volunteer to Second District.
Leps, H. M., from Volunteer to Eighth District.
Ward, J. E., from Volunteer to Tenth District.
Pearcy, E.,from Volunteer to Fourth Diistrict.

RECAPITULATION.

Number of Cadets—Catalogue 1891-2	88
New Cadets	45
	133
Graduated, resigned and discharged	36
Number of Cadets, April 1, 1892	97

THE PREPARATORY DEPARTMENT.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. The Preparatory Department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity for this department diminish. Meanwhile, and until their increase and fuller development, it can not be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the University many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Course of Study.

The course of study in the Preparatory Department aims to prepare young men for admission to the higher classes in the University.

Candidates for entrance should be at least fifteen years old and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State, including Arithmetic through common fractions; the elements of English Grammar; Geography; Orthography.

No special examination is required for entrance into the Junior class of the Preparatory school. Students are classed according to their apparent advancement, and are admitted *on trial* for the first term.

If a student fails to make a *general average* of 6 or a scale of 10 for the Fall term in the first, or Junior Year, he is not allowed to go on. For the remaining terms he is required to make an average of 7 in every study in order to be promoted at the end of the year. In the second or Senior Year each student is required to make an average of 6 *in each study* for the Fall Term. If he fail to do this, he is required to take the Junior year of that study over again, if it is a two year study. If it is not a two year study, he can not be passed in that study at the end of the year. After the Fall term, each student id the Senior year must make an average of 7 each term in every study in order to be promoted at the end of the year.

The course of study in the Preparatory Department is arranged as follows:

JUNIOR YEAR.

Fall Term.

Arithmetic—Greenleaf's Complete—from Common Fractions to Discount.....5 hours a week
English Grammar—(Swinton)—Etymology .....5 hours a week
Latin (commenced) .....5 hours a week

Winter Term.

Arithmetic (completed).....3 hours a week
English Grammar—Syntax and English Comp.....5 hours a week
Latin—Grammar and Reader—Chase & Stuart.....5 hours a week
Algebra—Wentworth's Academic—to Fractions.....2 hours a week

Spring Term.

Algebra--Wentworth's Academic .....5 hours a week
English Grammar—Anal., Pros. and English Comp.....5 hours a week
Latin—Grammar and Reader.....5 hours a week

NOTE.—Students in the Junior Year of the Preparatory are not allowed to take any other studies than the above.

The classes in the Junior Year are usually taught in two or three divisions. At the end of the Fall term the divisions are re-arranged *according to scholarship*, and those who are not proficient are required to go over the work again, or given special instruction adapted to their needs.

At the end of the Junior Year, students who are not proficient in any study, are required to take the same study the next year.

SENIOR YEAR.

Fall Term.

Algebra—Wells' University—Fractions to Imaginary Quantities .....2 hours a week
Cæsar (two books)—Latin Grammar.....5 hours a werk
Greek--Grammar and Reader (Goodwin).....5 hours a week
Geometry—Well's—Books 1 and 2.....2 hours a week
Book-keeping .....3 hours a week
English Composition—Williams .....1 hour a week
Free-hand Drawing.....2 hours a week

Winter Term.

Algebra- Imaginary Quantities to Progressions.....2 hours a week
Cicero's Orations (three orations)—Chase & Stuart's Grammar.....5 hours a week
Greek—Grammar and Reader.....5 hours a week
Geometry—Books 3, 4 and 5.....2 hours a week
Book-keeping.....3 hours a week
English Composition, &c.....1 hour a week
Free-hand Drawing.....2 hours a week

Spring Term.

Book-keeping .....3 hours a week
Algebra--Progressions to Logarithms.....2 hours a week
Geometry—Plane, completed.....2 hours a week
Virgil--Two Books of Æneid; Latin Grammar.....5 hours a week
Xenophon's Anabasis (two books), Greek Grammar.....5 hours a week
English Composition, &c.....1 hour a weed
Drawing.....2 hours a week

NOTE.—Candidates for the degree of Bachelor of Sciences are not required to take Greek. Candidates for the degree of Bachelor of Arts are not required to take Book-keeping.

NORMAL SCHOOL CERTIFICATES.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

APPROVED HIGH SCHOOLS.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so neccessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such schools for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The expenses of the committee will be paid, one-half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of 10.

5th. The Faculty reserve the right to withdraw such approval, if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who,

having been found deficient after their admission, can not pass a fair test examination in the prescribed course of preparatory studies.

6th. At the expiration of the term of four years, the approval may be renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsley Institute, Wheeling; Parkersburg High School (except Greek); Western Pennsylvania Classical and Scientific Institute, Mt. Pleasant, Pa.; Normal and Classical Academy, Buckhannon, W. Va.; Greenbrier Academy, Alderson, W. Va.; Morgantown High School (except Greek,) Charleston High School (except Greek).

NOTE.—In several of these schools Greek is not taught

SCHEDULE OF RECITATIONS—PREPARATORY DEPARTMENT.

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.
MONDAY.	Geometry I. Senior Latin I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I.	Geometry II. Senior Latin II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.
TUESDAY.	Senior Latin I. Senior Algebra I. Junior Latin I. Arithmetic I.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
WEDNESDAY.	Senior Latin I. Geometry I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I.	Senior Latsn II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III
THURSDAY	Senior Latin I. Senior Algebra I. Junior Latin. Arithmetic I.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
FRIDAY.	Senior Latin I. Geometry I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I	Senior Latin II. Preparatory English. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.

NOTE.—Free-hand Drawing at 2 P. M., two exercises a week, to be arranged when the Fall term begins.

ALUMNI.

Alumni Association.

Officers for 1891-2.

W. T. W. BARBE.....PRESIDENT.
J. S. STEWART.....SEC'Y. AND TREAS.

List of Alumni.

1870.

M. H. Dent, A. M., Grafton, W. Va., Lawyer.

1871.

O. H. Dille, M. S., Morgantown, W. Va., Farmer.
W. E. Joliffe, A. M., Bridgeport, W. Va., Teacher.

1872.

John H. Drabell, A. M., Des Moines, Iowa, Lawyer.
A. E. McLane, A. M. Steubenville, Ohio, Merchant.
B. W. Smith, A. M., Minneapolis, Minn, Lawyer.
I. C. White, A. M., Ph. D., Morgantown, W. Va., Prof. Geology, W. Va. University.

1873.

Hon. Chas. M. Babb, A. M., Greenland, W. Va., Farmer.
D. W. Borden, A. M., M. D., Kearneysville, W. Va., Physician.
W. L. Boughner, M. S., Palatine, W. Va., Farmer.
Hon. Jas. F. Brown, A. M., Charleston, W. Va., Lawyer and Regent W. Va. University.
E. T. Bullock, A. M., Parkersburg, W. Va., Lawyer.
John T. Harris. M. S., Parkersburg, W. Va., Court Reporter.
Geo. P. Linch, M. S. Atcheson, Kansas, Lawyer.
T. B. McLure, M. S., Cassville, W. Va., Teacher.
Thos. H. Price, M. S., M. D., Bridesburg, Pa., Physician.
W. T. Prichard, M. S., deceased.
D. B. Purinton, A. M., LL. D., Granville. Ohio, President Denison University.
M. L. Temple, A. M., Osceola, Iowa, Lawyer.
Jas. T. Waters, A. M., Charleston, W. Va., Lawyer.

1874.

R. V. Chadwick, A. M., deceased.
Rev. J. S. W. Dean, A. M.
Rev. Wm. M. Howell, A. M., Marysville, Kansas, Pastor Presbyterian Church.
Hon. T. P. Jacobs, A. M. New Martinsville, W. Va., Judge Fourth Judicial Circuit.
Hon. Chas. W. Lynch, A. M., Clarksburg, W. Va., Lawyer.
Rev. E. E. Moran, A. M., Ironton, Ohio, Pastor Presbyterian Church.
Frank Woods, A. M., Baltimore, Md., Lawyer.

1875.

S. S. Adams, A. M., M. D., Washington, D. C., Physician.
Rev. R. H. Dolliver, A. M., Chicago, Ill., Pastor M. E. Church.
Hon. J. P. Dolliver, A. M., Ft. Dodge, Iowa, M. C., Tenth District, Iowa.
F. A. Golden, B. S., Massfield, Oregon, Prin. Schools.
Jas. V. Martin, A. M., deceased.
J. J. Peterson, Tegucigalpa, Honduras, U. S. Consul.
A. L. Purinton, A. M., Nashville, Tenn., Prof. Chem., Normal College.

1876.

John C. Anderson, M. S., Bakersfield, Cal., Farmer.
L. H. Frazier, A. M., Uniontown, Pa., Lawyer.
H. D. Hubbard, M. S., deceased.
W. O. Ison, A. M., Washington, D. C., Treasury Department.
H. M. Kemp, B. S.
Geo. S. Laidley, M. S., Charleston, W. Va., Supt. City Schools.
Jas. H. Nash, M. S., deceased.
D. E. Wetzel, M. S., M. D., Huntington, W. Va., Physician.

1877.

W. G. Brown, Jr., A. M., Kingwood, W. Va., Lawyer.
C. B. Dille, A. M., LL.B., Morgantown, W. Va., Lawyer.
J. H. Hawthorne, A. M., Kansas City, Mo., City Judge.
Thos. M. Hood, A. M., M. D., Weston, W. Va., Physician State Asylum for Insane.
D. R. Rogers, A. M., M. D., Reagan, Neb., Physician.
E. C. Smith, M. S., Ravenswood, W. Va., Editor and Lawyer.
H. J. Snively, A. M., North Yakima, Washington, Prosecuting Attorney.
John L. Steele, A. M., Pittsburgh, Pa., City Editor "Chronicle Telegraph."
James S. Stewart, M. S., Morgantown, W. Va., Prof. Math. W. Va. University.

1878.

A. F. Courtney, B. S., deceased.
A. G. Dayton, A. M., Philippi, W. Va., Lawyer.
Jas. McM. Lee, A. M., Huntington, W. Va., Supt. City Schools.
Rev. E. J. Marsh, A. M., Santa Barbara, Cal., M. E. Church.
Hon. B. S. Morgan, A. M., Charleston, W. Va., State Supt. Schools.
Daniel Rich, A. M., Pleasanton, Kansas, Lawyer.

1879.

Geo. D. Purinton, A. M., PH. D., Columbia, Mo., Prof. Biology University of Mo.
W. A. Rogers, A. M., Cincinnati, Ohio, Attorney-at-Law.
S. S. Wade, M. S., M. D., Morgantown, W. Va., Physician.

1880.

Chas. E. Grafton, M.S., C. E., Chicago, Ill., Assistant Eng'r I. C. R. R
B. L. Keenan, M. S.. Wichita, Kan., Lawyer.
Rev. J. H. Marsh, A. B., Napomo, Cal., Pastor M. E. Church.
Hon. Geo. A. Pearre, Jr., A. M., Cumberland, Md., Attorney-at-Law
Rev. A. A. Waters, A. M., Abingdon, Ill., M. E. Church.

1881.

Thos. E. Hodges, A. M., Huntington, W. Va., Principal State Normal School.
Wm. M. Hyland, A. M., Osceola, Iowa, Supreme Court Reporter.
H. N. Ogden,, A. M. Morgantown, W. Va., Professor English West Virginia University.

1882.

T. R. Boyd, A. B., deceased.
Z. K. Brown, A. B., M. D., Mt. Morris, Pa., Physician.
D. H. Courtney, A. B., M. D., Morgantown, W. Va.
A. L. Cox, B. S., Sweetbrier, Texas, Teacher.
Theophilus E. Hodges, A. B., Buckhannon, W. Va., Teacher.
Rev. E. D. Jeffries. B. S., Alderson, W. Va., Pastor Pres. Church.
J. H. Lawhead, B. S., M. D., West Newton, Pa., Physician.
G. C. Lewis, A. B., Pittsburgh, Pa., Lawyer.
James H. Stuart, A. B , LL. B., Winfield, W. Va., Lawyer.

1883.

George C. Baker, A. B., LL. B., Morgantown, W. Va., Lawyer.
W. T. Bland, B. S., LL. B., Atcheson, Kansas, Lawyer.
L M. Boyers, A. B., LL. B., deceased.
Benj. Brown, A. B., Denver, Col., Lawyer.
S. B. Brown,. A. B., Morgantown, W. Va., Assistant in Geology West Virginia University.
J. F. Cork, A. B., Charleston, W. Va., Clerk to State Supt. Schools.
Rev. George B. Foster, A. M., Toronto, Canada, Professor Philosophy McMaster's University.
Walter Hough, A. B., Washington, D. C., Smithsonian.
John L. Johnston, M. S., C. E., Morgantown, W. Va., Professor Applied Math., West Virginia University.
I. G. Lazzell, A B., LL. B., Morgantown, W. Va., Lawyer.
J. E. Musgrave, A. B., M. D., Handley, W. Va., Physician.
S. P. Wells, Jr., B. S., Minneapolis, Minn., General Agent Electric Light Co.

1884.

W. T. W. Barbe, B. S., Parkersburg, W. Va., Editor "State Journal."
R. C. Berkeley, Jr., A. B., C. E., Weston, W. Va., Civil Engineer.
W. H. Michael, A. B., Minneapolis, Minn., Lawyer.
H. L. Robinson, A. B., LL. B., Uniontown, Pa., Lawyer.

1885.

N. D. Adams, A. B., Scott City, Kansas, Editor.
Robert Armstrong, B. S., Point Pleasant, W. Va., Business.
A. B. Bush, A. B., ————, Miss., Teacher.
Harvey Fleming, B. S., Washington, D. C., Agent Colorado Press.
B. W. Meadows, A. B., deceased.
Hon. J. D. Sweeney, B. S., Concord Ch., W. Va., Prof. State Norma School.
R. W. Tapp, A. B., deceased.

1886.

R. A. Armstrong, A. M., West Liberty, W. Va., Prin. State Normal School.
W. N. Berkeley, A. B., Ph. B., M. D., Morgantown, W. Va., Student in Vienna.
R. W. Dawson, A. B., LL. B., Uniontown, Pa., Lawyer.
T. R. Shepherd, A. B. LL. B., Huntington, W. Va., Lawyer.
Rev N. M. Waters, A. B., Dubuque, Iowa, Pastor M. E. Church.
Z. F. Yost, B. S., Pontiac, Ill., Business.

1887.

J. E. Charles, B. S., Point Pleasant, W. Va., Business.
E. S. Elliott, A. B., LL. B., Kingwood, W. Va., Ass't. U. S. Dist. Att'y., W. Va.
H. C. Ogden, A. B., Wheeling, W. Va., Editor Evening News.
Thos. G. Rector, B. S., Argentine Republic, S. A., Signal Service.
Leroy Swann, B. S., Connellsville, Pa., Business.

1888.

Jas. D. Cox. B. S., Hedgesville, W. Va., Teacher.
H. H. Emmert, B. S., LL. B., Martinsburg, W. Va., Lawyer.
C. Hartmeyer, A. B., Bruceton, W. Va., Business.
D. L. Jamison, A. B. LL. B., Parkersburg, W. Va., Lawyer.
Rev. H. H. Ryland, A. B., ———, Pa., Pastor Presbyterian Church.
Frank Snider, A. B., Senitobia, Miss., Prin. Schools.

1889.

B. C. Alderson, A. B., Morgantown,. W. Va., Assist An. Lang. W. Va. University.
J. E. Brown, B. S., LL. B., Chicago, Ill., Lawyer.
G. B. Chorpening, B. S., Clarksburg, W. Va., Civil Engineer.
Jas. E. Dawson, A. B., LL. B., Uniontown, Pa., Lawyer.
Chas. N. Finnell, A. B. Morgantown, W. Va., Teacher.
G. G. Heiner, A. B., West Point, N. Y., Cadet U. S. Mil. Academy.
A. J. Hare, A. B., Morgantown, W. Va., Instructor W. Va. University.
J. A. Jackson, A. B., Kingwood, W. Va., Lawyer.
L. A. Lindemuth, A. B., Princeton, N. J.. Theological Seminary.
Chas. Rankin, B. S., Roanoke, Va., Civil Engineer N. & W. R. R.
Rev. J. L. Roemer, A. B., Thomas Station, Pa., Pastor Presbyterian Church.
H. G. Stoetzer, A. B., Princeton, N. J., Theological Seminary.

1890.

Harvey Brand, A. B., Morgantown, W. Va., Principal of Schools.
F. W. Clark, A. B., LL. B., New Martinsville, W. Va., Lawyer.
L. J. Corbly, A. B., Water Valley, Miss., Principal City Schools.
Bert. H. Hite, B. S. Morgantowni W. Va., Student John Hopkins U.
W. F. Reynolds, A. M. Nashville, Tenn., Prof. Latin Normal College.
F. C. Reynolds, A. B., Keyser, W. Va, Lawyer.
E. H. Vickers, A. B., Morgantown, W. Va., Instructor West Virginia University.
Rev. E. E. Woodson, A. B. Morgantown, W. Va., Pastor Baptist Church.

1891.

A. B. Cooper, A. B., Como, Miss. Teacher.
J. E. Davis, A. B., LL. B., Morgantown, W. Va., Instructor West Virginia University.
C. R. Duvall, B. S., Richmond, Va., Instructor Mathematics and Chemistry.
J. E. Galford, B. S., Weston, W. Va., Principal City Schools.
U. S. G. Hayes, B. S., Grafton, W. Va., Assistant Principal Schools.
C. McC. Lemley, C. E., Pittsburgh, Pa., Civil Engineer. Penna. R. R.
T. D. Lynch, C. E., Pittsburgh, Pa., Civil Engineer.
Hattie E. Lyon, A. B., Fredonia, N. Y.
M. D. Post, A. B. Clarksburg, W. Va., Law Student West Virginia University.
F. G. Ross, C. E., Pittsburgh, Pa., Civil Engineer Pennsylvania R. R.
J. R. Trotter, A. B. Buckhannon, W. Va., Teacher Latin and Mathematics.
Chas. L. White, A. B., Morgantown, W. Va., Princeton Theological Seminary.
P. C. White, A. B. Morganton, W. Va., Alleghany, Pa., Seminary.
DeWitt White, A, B. Morgantown, W. Va., Alleghany, Pa., Seminary.

LAW GRADUATES.

1879.

William R. Thompson, Hinton.

1880.

Frank T. Haymond, Morgantown.
Waitman T. Houston, Morgantown.

1881.

E. W. Bedinger, Charlestown.
Samuel C. Kelley, Morgantown.

1882.

Arthur L. Cox, Marion county.
L. C. Tabb, Jefferson county.

1883.

Frank Cox, Morgantown.
S. A. Hays, Glenville.
Melville Peck, Philippi.
William Rich, Monongalia county.
John W. Wiltshire, Jefferson county.

1884.

Meigs Bland, Weston.
W. T. Bland, B. S., Weston.
J. F. Cork, A. B., Charleston.
I. G. Lazzell, A. B., Morgantown.
B. S. Morgan, A. B., Charleston.

1885.

B. L. Keenan, M. S., Monongalia county.
F. Lively, Summers county.
James H. Stuart, A. B., Winfield, Putnam county
W. S. Stuart, Doddridge county.
H. J. Sturgis, Smithfield, Pa.

1886.

George C. Baker, A. B., Morgantown.
L. M. Boyers, A. B., deceased.
C. B. Dille, A. B., Morgantown.
R. E. Fast, Morgantown.
S. M. Musgrove, Mason county.
H. L. Robinson, A. B., Uniontown, Pa.

1887.

R. E. L. Blackwood, Charleston.
R. W. Dawson, A. B., Uniontown, Pa.
E. S. Elliott, A. B., Kingwood.
T. H. Keenan, Monongalia county.
J. M. McGrath, Lewisburg.
A. L. Romine, Clarksburg.
E. P. Rucker, Lewisburg.
J. W. Smith, deceased.
M. F. Snider, West Union.

1888.

Charles A. Clark, Hinton.
Alexander Dupuy, Louisiana.
Melville H. Fleming, Monongalia county.
Lewis C. Lawson, Harrison county.
R. K. McComb, Mason county.
A. F. Morris, Cabell county.
Geo. I. Neal, Huntington.
U. S. G. Pitzer, Martinsburg.
Thos. R. Shepherd, A. B., Huntington.
Thos. J. Woofter, Tennessee.

1889.

Wm. B. Cornwell, Romney.
N. C. McNeil, Pocahontas county.
W. L. P. Peyton, Kansas.
Stewart F. Reed, Clarksburg.
Ed. G. Smith, Harrison county.
J. F. Wilson, Grafton.
Thos. G. Yates, Taylor county.

1890.

A. S. Alexander, Charleston.
J. E. Chipley, Moorefield.
F. H. Garrett, Ohio.
D. L. Jamison, A. B., Parkersburg.
Robt. L. Keadle, Union.
Tucker H. Ward, Randolph county.

1891.

Benj. F. Bailey, Taylor county.
S. E. Boggess, Spencer.
Lynn Brannon, Glenville.

Jas. E. Brown, B. S., Chicago.
W. L. Camden, Fairmont.
Frank W. Clark, A. B., New Martinsville.
L. J. Cobun, Preston county.
T. J. Cummings, Weston.
Jas. E. Davis, A. B., Morgantown.
Jas. E. Dawson, A. B., Uniontown, Pa.
W. E. Hines, Monroe county.
R. E. L. Hutchinson, Huntington.
C. E. Morris, Pleasant Green, Ohio.
E. H. Morton, Addison.
W. S. O'Brien, Weston.
C. B. Riggle, Middlebourne.
J. B. Settle, Fayette county.
C. R. Summerfield, Fayette county.

CATALOGUE OF STUDENTS.

Abbreviations.—Prep., Preparatory: Coll., Collegiate: Agr., Agricultural: Engin., Engineering.

Adams, Maxwell	St. George, Tucker co	Coll
Alderson, George	Alderson, Monroe co	Prep. & Coll
Alderson, William Wickham	Alderson, Monroe co	Coll
Alexander, George Milton	Morgantown	Coll. & Law
Allen, Robert E. Lee	Lima, Tyler co	Coll
Allen, William Henry	Coal Valley, Fayette co	Prep
Babb, Macker	Medley, Grant co	Coll
Bambrick, George Loren	New Cumberland, Hancock co	Prep & Coll
Barnett, Oscar William	Lockhart's Run, Wood co	Prep & Agr
Barracklow, Henry Waters	Dunbar, Pa	Prep
Beattie, James Fife	Morgantown	Engin
Bell, John A	Zola	Law
Bennett, Charles J. C	Fairmont	Coll
Bennett, Cary M	Bennett, Gilmer co	Law
Bivins, R. F	Washington, D. C	Coll
Blake, N. B	Cox's Landing, Cabell co	Prep & Coll
Boyd, Alpheus Edward	Uniontown, Pa	Prep & Coll
Boyd, Samuel Patterson	Uniontown, Pa	Prep
Boyers, A. L	Randall, Monongalia co	Prep
Brannon, Henry, Jr	Weston	Prep
Brown, Royston	Guyandotte, Cabell co	Prep
Brownfield, Hustead	Fairmont	Prep
Bumgardner, O. H	Elizabeth, Wirt co	Prep
Bumgardner, Z. H	Elizabeth, Wirt co	Prep
Burdett, William Alexander	Ona, Cabell co	Coll
Callison, G. W	Levisay, Nicholas co	Prep
Campbell, W. E	Smithfield, Pa	Prep
Carney, John Joseph	Jacksonville, Lewis co	Law
Carrigan, Charles Edgar	Sherrard, Marshall co	Coll
Carter, William Johnson	Raleigh, N. C	Coll
Chambers, Bailey Wilson	Walnut Grove, Roane co	Prep
Chambers, Okey Johnson	Walnut Grove, Roane co	Prep
Coffman, Carrol Clair	Bridgeport, Harrison co	Engin
Cogar, John S	Addison, Webster co	Law
Collins, James Higbee	Uniontown, Pa	Coll
Cooper, John T	Parkersburg	Prep. & Coll
Cox, Thomas Benton	West Liberty, Ohio co	Coll
Crouch, J. W	Huttonsville, Randolph co	Prep
Dailey, Reginald Watson	Springfield, Hampshire co	Prep
Darrah, John Robert	Washington, Pa	Law
Davenport, Braxton	Charlestown, Jefferson co	Coll
Day, S. H., A. B.,	Morgantown	Law
Dille, Thomas Reay	Morgantown	Prep
Donaldson, George	Charleston, Kanawha co	Prep
Dorsey, George Frederick	Morgantown	Coll
Downing, Thomas Finn	Morgantown	Coll
Dudding, Jerome	Winfield, Putnam co	Prep. & Coll

Duncan, Henry Clay.....Kenova, Wayne co.....Prep. & Coll
Duncan, W. G.....Uniontown, Pa.....Prep
Duvall, Roy Perrin.....Jordan Springs, Va.....Prep
Eddy, Willam J.....Cross Roads, Monongalia co.....Coll
Edmiston, Matthew Arnold.....Weston, Lewis co.....Prep. & Coll
Ellis, Joseph Rolly.....Newburg, Preston co.....Coll
Fleming, Hayward.....Webster, Taylor co.....Prep. & Coll
Fleming, Richard Lee.....Cassville, Monongolia co.....Law
Flynn, D. F.....Elk Garden, Mineral co.....Prep
Ford, Geoage Michael.....Masontown, Preston co.....Coll
Francis, John Wiley.....Moundsville, Marshall co.....Coll
Franks, Holly Wilkinson.....New Geneva, Pa.....Prep
French, G. H.....Princeton, Mercer co.....Prep. & Coll
Fry, Charles G.....Wayne C. H.....Prep
Garlow, Ezra Clark.....Maidsville, Monongalia co.....Engin
Garlow, Lulu.....Maidsville, Monongalia co.....Coll
Gibson, Bert Thurman.....Tunnelton, Preston co.....Coll
Glasscock.....Morgantown.....Prep
Gore, Claude Webster.....Clarksburg.....Coll
Gorman, Michael E.....Morgantown, Monongalia co.....Coll
Graham, Samuel Willey.....Mason, Preston co.....Coll
Greynolds, Lew.....Beverly, Randolph co.....Prep
Grier, John Alexander.....Parkersburg.....Coll
Hackney, Ida E.....Morgantown.....Coll
Hackney, John Milton.....Morgantown.....Coll
Hackney, Lilian May.....Morgantown.....Coll
Hagans, Elizabeth Ludington.....Morgantown.....Coll
Hale, J. E.....Elizabeth, Roane co.....Prep
Hall, C. B.....Morgantown.....Law
Hanshaw, James Edgar.....Burton, Wetzel co.....Prep
Harman, J. W.....Macksville, Pendleton co.....Law
Harmer, H. W.....Shinnston, Harrison co.....Law
Harner, C. Milton.....Morgantown.....Coll
Hartley, Alva Camden.....Masontown, Preston co.....Prep & Coll
Hartman, Edward Thornton.....Tunnelton, Preston co.....Coll
Haught, L. H.....St. Leo, Monongalia co.....Prep
Haught, Orestes Lloyd.....Silver Hill, Wetzel co.....Prep
Hayes, Thomas Wilford.....Morgantown.....Prep & Coll
Henderson, Joseph Lindsey.....Monongalia co.....Coll
Henrietta, William Huston.....Moundsville, Marshall co.....Prep
Herndon, Isaiah Christian.....Bramwell, Mercer co.....Law
Hill, John Emmett.....Fredericktown, Pa.....Prep
Hill, Leroy Childs.....Fredericktown, Pa.....Prep
Hogg, Gory.....Sewell Depot, Fayette co....Prep & Coll
Holbert, John Thomas.....Watson, Marion co.....Engin
Holden, William Jackson.....Craigmoor, Harrison co.....Prep & Coll
Hood, Charles Philson.....Shinnston, Harrison co.....Prep
Houston, Hough.....Easton, Monongalia co.....Coll
Hughes, John Wilbur.....Troy, Gilmer co.....Engin
Hustead, F. J.....High House, Pa.....Prep
Hutton, Napoleon Bonaparte.....Huttonsville, Randolph co.....Prep
Jaco, Lin Milton.....Easton, Monongalia co.....Coll
Jacob, Samuel Sprigg, Jr.....West Liberty, Ohio co.....Coll
Jenkins, Samuel Rozel,.....Grafton, Taylor co.....Engin
Johnson, George William.....Leetown, Jefferson co.....Coll
Johnson, James Martin.....Morgantown.....Prep & Coll
Johnson, Laura D.....Morgantown.....Coll
Johnson, Thomas Carskadon.....Morgantown.....Prep
Joliff, Clarence F.....Uniontown, Wetzel co.....Prep
Jones, Clement Ross.....Knottsville, Taylor co.....Engin
Kittle, Lee.....Beverly, Randolph co.....Prep
Kincaid, Dill Busee.....Knottsville, Taylor co.....Coll

Kinkaid, Ira	Halleck, Monongalia co	Prep
Knutti, John G	Alpena, Randolph co	Prep
Koraku, Walchro	Japan	Law
Krebs, Charles, Edward	New Martinsville, Wetzel co	Engin
Kunkle, Justin	Alderson, Monroe co	Prep & Coll
Kunst, George Henry A	Pruntytown, Taylor co	Prep & Coll
Lawhead, Sallie	Morgantown	Coll
Lemasters, Morgan	Cross Roads, Monongalia co	Prep & Law
Lemon, John S	Williamsburgh, Md	Engin
Leonard, William C	Parkersburg, Wood co	Prep
Leps, Henry Morse	Frankford, Greenbrier co	Prep
Link, Charles William	Duffields, Jefferson co	Prep & Coll
Link, W. S	Duffields, Jefferson co	Prep & Coll
Lipscomb, Archibald Jerome	St. George, Tucker co	Prep
Lockwood, Frederick, J	Davis, Tucker co	Prep
Long, John Jerome	Mt. Morris, Pa	Prep
Longanecker, J. C	Morgantown	Coll
Lowenstein, Isaac	Charleston, Kanawha co	Prep & Coll
Madagan, William Christian	Morgantown	Prep
Manning, Frank, J., Jr	Charlestown, Jefferson co	Prep
Martin, Andrew Kent	Philippi, Barbour co	Coll
Martin, Philip Britton	Herring, Preston co	Prep & Coll
Mattingly, Ignatius Raymond	Howesville, Preston co	Law
Mayers, Clarence Edwin	Fairmont, Marion co	Coll
McBee, Perry Cobb	Halleck, Monongalia co	Prep & Coll
McClung, James Andrew	Harmony Falls, Nicholas co	Prep
McCreery, H. L	Raleigh C. H	Prep
McWhorter, John Camillus	Berlin, Upshur co	Prep. & Coll
McWhorter, John Scott	Buckhannon	Coll
Meyer, William Charles	Wheeling	Coll
Miller, Charles Frederick	Keyser, Mineral co	Prep. & Coll
Miller, R. S	Hedgesville, Mineral co	Prep
Minshall, Frederick Mortimer	Piedmont, Mineral co	Engin
Moore, Bismarck G	Proctor, Wetzel co	Prep
Moore, Charles Ray	Proctor, Wetzel co	Prep
Moore, Frederick	Belington, Barbour co	Prep. & Coll
Moore, John Morgan	Pt. Pleasant, Mason co	Prep. & Coll
Morgan, Robert Horatio	Laurel Point, Monongalia co	Coll
Morris, C. R	Laurel Point, Monongalia co	Coll
Morris, George Leland	Teays, Putnam co	Prep. & Coll
Morris, Thomas Harvey	Rockport, Wood co	Law
Murphy, Charles M	Burnersville, Barbour co	Law
Musgrave, D	Maggie, Mason co	Prep. & Coll
Norris, Sarah Lowther	Glenville, Gilmer co	Coll
Nuzum, John	Garfield, Jackson co	Coll
Oesterling, Harry Edward	Wheeling	Coll
Paul, James Washington	Newburg, Preston co	Coll
Pearcy, Charles Sylvester	Normantown, Gilmer co	Prep
Pearcy, Evart	Normantown, Gilmer co	Prep
Perry, Mark	Fort Spring, Greenbrier co	Prep. & Coll
Peters, John Atkinson	Empire, Ohio	Prep
Peters, Samuel Vinson	Fort Gay, Wayne co	Prep. & Coll
Pickenpaugh, J. Clark	Morgantown	Prep
Poe, Charles J	Swamp Run, Upshur co	Prep
Poling, Aldine S	Philippi, Barbour co	Law
Post, Melville Davisson, B. S	Romines Mills, Harrison co	Law
Price, Andrew G. P	Marlington, Pocahontas co	Law
Protzman, Alonzo Abner	Morgantown	Prep
Protzman, Jesse B	Morgantown	Coll
Rader, Archibald	Enan, Nicholas co	Prep
Ramsay, Robert Hudson	Clarksburg	Coll
Reynolds, Carson Howell	Morgantown	Prep. & Coll

Reynolds, Mabel	Morgantown	Coll
Ridgeway, Charles Nelson	Maidsville, Monongalia co	Coll
Rodgers, Walter Dudley Neal	Scottdale, Pa	Coll
Rohrbaugh, T. M	Buckhannon	Engin
Roseberry, Andrew Horton	Point Pleasant, Mason co	Prep & Agr
Ross, Charles W	Hedgesville, Berkeley co	Prep
Rowan, Frank Asbury	Beverly, Randolph co	Prep
Sample, C. W	Randall, Monongalia co	Prep
Sanders, James Clark	Maidsville, Monongalia co	Prep
Schoonmaker, George Filson	Uniontown, Pa	Prep
Sheppard, Addison Hite	Reedy Ripple, Wirt co	Coll
Showalter, Emmet M	Ritchie C. H	Law
Simmons, Harvey Jefferson	Spencer, Roane co	Prep
Singleton, George Edwin	Salt Lick Bridge, Braxton co	Coll
Sisler, Charles Benton	Stewartstown Monongalia co	Call
Sisler, Millard Talford	Stewartstown, Monongalia co	Coll
Smith, Andrew Brown	Uniontown, Pa	Coll
Smith, Harry William	Ripley's Tyler co	Coll
Sommerville, H. Ashby	Elizabeth, Wirt co	Law
South, Winnie	Wadestown, Monongalia co	Coll
Standiford, William Russell	Elm Grove, Ohio co	Prep
Steed, Henry Alfred	Newark, Wirt co	Prep
Stevens, William Waugh	Alderson Monroe co	Prep & Coll
Stewart, Terence David Barton	Georgetown, Monongalia co	Prep
Stewart, William Jones	New York City	Prep
Stidger, George Hugh	Cameron, Marshall co	Prep
Sturm, Marshall	Glover's Gap Marion co	Law
Swaney, W. G	New Cumberland, Hancock co	Prep
Tait, Alexander Gordon	Randall, Monongalia co	Prep
Talbott, R. A	Philippi	Prep & Law
Thomas, A. R	Charlestown, Jefferson co	Prep
Thomas, William Marion	Farmington, Marion co	Prep
Thompson, Carl C.	Uniontown, Wetzel co	Coll
Vance, Cyrus Earl	Clarksburg	Coll
Vance, John Carl	Clarksburg	Coll
Vinson, Linzey T	Ceredo, Wayne co	Prep & Coll
Wade, Charles A	Morgantown	Coll
Ward, Jubal Early	Lee Bell, Randolph county	Prep
Warman, Altha	Morgantown	Coll
Warne, Boyd Emery	Washington, Pa	Law
Weaver, William Fairman	Moundsville, Marshall co	Prep
Wharton, J. L	Randall, Monongalia co	Prep
Wharton, W. L	Randall, Monongalia co	Prep
White, Anna B	Morgantown	Coll
White, Bennett Sexton	Morgantown	Prep
White, Kemble	Belton, Marshall co	Coll
White Stella S	Morgantown	Coll
Wiles, John William	Aurora, Preston co	Coll
Williams, Allern Derrick	Uniontown, Pa	Coll
Williams, Thomas Marion	Ewell, Greenbrier co	Prep
Woods, Homer B	Ritchie C. H	Law
Yost, Lucian Nay	Amos, Marion co	Prep & Coll
Zearley, Edmund Lee	Point Marion, Pa	Engin

Counties of West Virginia Represented.

Barbour 5, Berkeley 2, Braxton 1, Cabell 3, Fayette 2, Gilmer 5, Grant 1, Greenbrier 3, Hancock 2, Hampshire 1, Harrison 9, Jackson 1, Jefferson 6, Kanawha 2, Lewis 3, Marion 7, Marshall 6, Mason 3, Mercer 2, Mineral 3, Monongalia 55, Monroe 4, Nicholas 3, Ohio 6, Pocahontas 1, Preston 10, Pendleton 1, Putnam 2, Raleigh 1, Randolph 7, Ritchie 2, Roane 4, Taylor 4, Tucker 3, Tyler 3, Upshur 4, Wayne 4, Webster 1, Wetzel 7, Wirt 5, Wood 5.

States and Countries Represented.

West Virginia	199
Pennsylvania	18
District of Columbia	1
Maryland	1
New York	1
North Carolina	1
Ohio	1
Virginia	1
Japan	1
Total attendance	224

Representation by Departments.

Collegiate (A. B., B. S. courses)	70
Law	26
Engineering	12
Preparatory	80
Preparatory and Collegiate	36
	224

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The Station was organized in June, 1888, by the Board of Regents of the West Virginia University, accepting the Congressional appropriation, electing a Director, directing a Station building to be constructed and outlining the policy it wished pursued, and appointing a committee of its body to perfect its organization. Since then, the building has been completed and provided with ample laboratories, offices, libraries, apparatus and the necessary facilities for carrying on the scientific investigations contemplated under the congressional Act establishing the Station.

The objects of the Station are stated as follows in the Act establishing it:

Section 2. "That it shall be the object and duty of said Experiment Station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects of crops of different kinds: the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The scientific work of the Station is published in bulletins and in the Annual Report, which are distributed free of charge to all farmers in the State desiring the same. In addition to this, the Station attempted during the past winter to develop an interest in farmers' institutes in various sections of the State, and a number of farmers' meetings were held with this object in view. During the past year considerable attention has been devoted to experimenting upon the effects of fertilizers upon the soils in different sections of the State. A large amount of Botanical, Entomological and Chemical work has been done. The results of the work in the various departments not already published will appear in due time.

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seed, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not

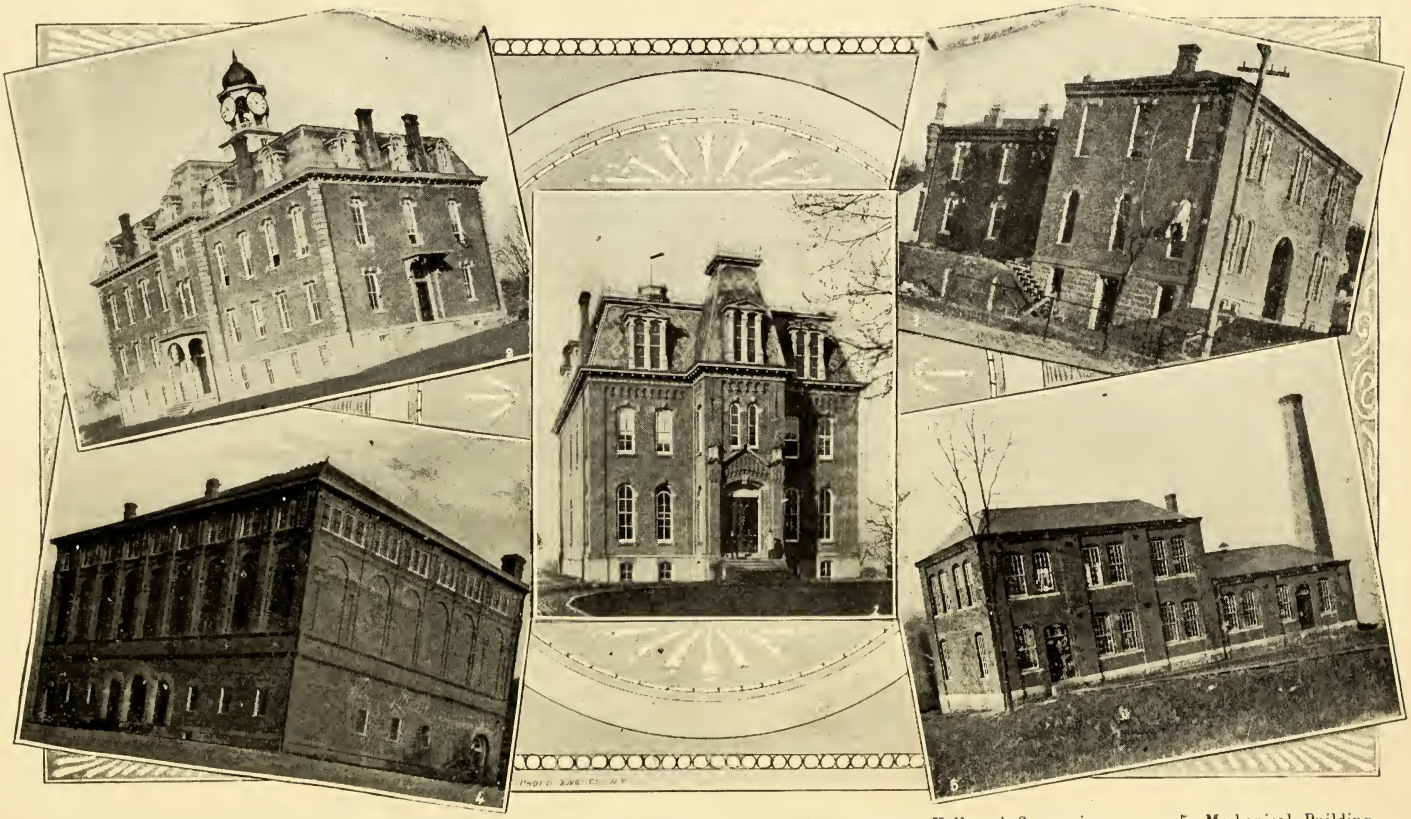
expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, or study practical dairying, free of charge. The work of the Station, however, is not intended to be in the form of instruction ,and persons wishing to work in the Station building with any of the investigators must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

COMPARATIVE VIEW OF COURSES FOR BACHELOR DEGREES.

FIRST YEAR.	A. B.	B. S.	B. S. C. E.	B. S. M. E.	B. AGR.
	Fall Term.	*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*
8½	Physics. 3	Physics. 3	Physics 3	Physics 3	Algebra 2
9½	Latin and Greek 5	French. 5	French. 5	French.. 5	Book-keeping 3, El. Ag. 2 5
10½	Math 4	Math.. 4	Math.. 4	Math.. 4	Geom. 2, Eng. 1 3
11½	English. 3	English 3	English 3	English 3	Chem. 3. Polit. Econ. 2 5
2	....	....	Drawing. 2	Shop-work... 2	....
	Winter Term.	*Winter Term.*	*Winter Term.*	*Winter Term.*	*Winter Term.*
8½	Physics 3	Physics 3	Physics 3	Physics 3	Algebra 2
9½	Latin and Greek 5	French.. 5	French. 5	French.. 5	Book-keep. 3, Farm Econ. 2...5
10½	Math. 4	Math 4	Math. 4	Math 4	Geom. 2, Eng. 1 3
11½	English. 3	English. 3	English 3	English 3	Chem. 3. Botany 2 5
2	....	....	Drawing. 2	Shop-work 2	....
	Spring Term.	*Spring Term.*	*Spring Term.*	*Spring Term.*	*Spring Term.*
8½	Physics. 3	Physics. 3	Physics 3	Physics 3	Algebra. 2
9½	Latin and Greek 5	French 5	French 5	French 5	Book-keep. 3, Farm Law 2 ..5
10½	Math 4	Math.. 4	Math 4	Math. 4	Geom. 2, Eng. 1 3
11½	English 3	English 3	English. 3	English. 3	Chem. 3, Botany 2 5

WEST VIRGINIA UNIVERSITY.



1, University Hall. 2, Preparatory Building. 3, Experiment Station. 4, Commencement Hall and Gymnasium. 5, Mechanical Building.

CATALOGUE

—OF—

WEST VIRGINIA UNIVERSITY.

MORGANTOWN.

For the Year 1892-93.

CHARLESTON, W. VA.
MOSES W. DONNALLY, PUBLIC PRINTER,
1893

UNIVERSITY CALENDAR.

The University year consists of three terms, beginning for the year 1893-4, respectively as follows: The Fall term, Wednesday, September 13th, 1893; Winter term, Wednesday, January 3d, 1894, and the Spring term, Wednesday, April 4th, 1894. The annual commencement is on the second Wednesday of June.

1893.

June 5–12th—Final examinations.

June 11th—Sunday, 11 A. M., Baccalaureate Sermon by Rev. W. J. Young, D. D., of Richmond, Va.

June 12th—Monday, 8 P. M., Regents' Prize Contest in Declamation.

June 13th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 14th—Wednesday, 10 A. M., Commencement.

Vacation.

September 12th—Tuesday, Entrance Examinations.

September 13th—Wednesday, 8:15 A. M., Fall Term begins.

November 23rd—Thursday, 7:30 P. M., Senior Orations.

November 29th—1 P. M., Thanksgiving recess begins.

December 4th—Monday, 8:15 A. M., Exercises resumed.

December 15th–22d—Fall Term examinations. Vacation of two weeks.

1894.

January 3rd—Wednesday, 8:15 A. M., Winter Term begins.

February 22nd—Thursday, Washington's birthday. Holiday.

February 27th—Tuesday, 7:30 P. M., Senior Orations.

March 21-27th—Winter Term Examinations. Vacation one week.

April 4th—Wednesday, Spring Term begins.

June 4-10th—Final examinations.

June 13th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent	P. O. Address.	Term Expires.
1.	J. B. SOMMERVILLE	Wheeling	1897
2.	CLARENCE L. SMITH	Fairmont	1897
3.	JOHN C. VANCE	Clarksburg	1898
4.	R. G. LINN	Glenville	1898
5.	JOHN G SCHILLING	Spencer	1893
6.	EDWARD A. BENNETT	Huntington	1893
7.	WIRT A. FRENCH	Princeton	1894
8.	M. J. KESTER	Union	1894
9.	JAS. F. BROWN	Charleston	1895
10.	THOMAS J. FARSWORTH	Buchannon	1895
11.	JOSEPH MORELAND	Morgantown	1895
12.	JOHN A. ROBINSON	Patterson's Creek	1896
13.	W. W. BROWN	Kabletown	1896

Officers of the Board.

JOHN A. ROBINSON, President,
JOHN I. HARVEY, Treasurer,
W. P. WILLEY, Secretary,
JOHN A. MYERS, Sup't Grounds and Buildings.

Executive Committee.

JOHN A. ROBINSON, Chairman,
M. J KESTER,
C. L SMITH,
T. J. FARNSWORTH,
JOHN C. VANCE.

Experiment Station Committee.

JOHN A. ROBINSON, Chairman,
T J. FARNSWORTH,
W. W BROWN,
JOSEPH MORELAND,
J. G. SCHILLING.

FACULTY AND TEACHERS.

(In the Order of Official Seniority.)

E. M. TURNER, LL. D., PRESIDENT,
Professor of Political Economy.

P. B. REYNOLDS, D. D., VICE PRESIDENT,
Professor of Metophysics.

ROBERT C. BERKELEY, M. A., LL. D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages and Literature.

A. W. LORENTZ, A. M.
Principal of Preparatory Department.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence.

A. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics,

JAMES W. HARTIGAN, A. M., M. D., F. S. S., F. R. M. S.,
Professor of Biology.

JOHN A. MYERS, PH. D.
Director of the Experiment Station.

HOWARD N. OGDEN, A. M.,
Professor of English.

HENRY B. DAVENPORT, JR., C. E.,
Professor Civil and Mining Engineering.

JOHN L. JOHNSTON, C. E.,
Professor of Applied Mathematics and Drawing.

JAMES S. STEWART, M. S.,
Professor of Mathematics.

T. CLARK ATKESON, PH. D., LL. B.,
Professor of Agriculture.

First Lieutenant FRANK DEW. RAMSAY, 14th Inf., U. S. A.,
Professor of Military Science and Tactics.

S. B. BROWN, A. M.,
Professor of Geology.

WM. S. ALDRICH, M. E.,
(Acting) Professor of Mechanical Engineering.

A. J. HARE, A. B.,
Assistant in Preparatory Latin and Greek.

CLARA HOUGH,
Librarian.

AGRICULTURAL EXPERIMENT STATION.

Official Staff.

JOHN A. MYERS, PH. D. ..... Director.
D. D. JOHNSON, A. M. ..... Agriculturist.
R. J. J. DE ROODE, PH. D. ..... Chemist.
A. D. HOPKINS ..... Entomologist.
F. WM. RANE, B. Agr., M. S. ..... Horticulturist and Microscopist.
SUSIE V. MAYERS ..... Stenographer and Book-Keeper.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Script" donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela river and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and by daily boat from Pittsburgh. It is expected that rail communication will be completed to Pittsburgh during the present year. Morgantown is a small place, where there are few temptations to allure young men from study, and is in this respect an admirable location for an educational institution. Its climate is healthful, the air pure and bracing and free from malaria. The town is supplied with pure mountain water by a system of water works, and with natural gas for fuel and illumination from the Mt. Morris gas wells.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures; three stories high, which contain lecture and

recitation rooms, library, museum, and the rooms of the two literary societies.

A new building for the Mechanical Department has been erected and is now occupied for instruction in that Department. An addition to this building, to furnish additional facilities for instruction in the higher courses in Mechanical Engineering, will be made during the coming year. The building for the Armory and Commencement Hall has been completed and contains a well equipped gymnasium

The Science Hall, a new building now in process of erection, will contain rooms for the departments of Physics, Chemistry, Geology and Civil and Mining Engineering. It contains well equipped laboratories in Physics, Chemistry and Engineering, and will be ready for occupancy in September, 1893.

Organization.

The organization of the University includes the following departments:

1. The collegiate department, in which courses of study are offered leading to the degrees of Bachelor of Arts, Bachelor of Sciences, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Agriculture. Post-graduate or University courses are also offered for the degrees of Master of Arts and Master of Sciences.
2. A military department in which instruction is given in Military Science and Tactics by a graduate of West Point, detailed by the President from the United States Army.
3. A law department having a professional course of study leading to the degree of Bachelor of Laws.
4. A preparatory department, for preparing students to enter the collegiate classes.
5. The Agricultural Experiment Station.

Endowment Fund: income.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each county being entitled to one student under free tuition for every five hundred population in the county. This does not apply, however, to the Law School.

Additional Endowment.

By an act of Congress passed August 30th, 1890, there was appropriated for the year ending June 30th, 1890, to each State and Territory the sum of $15,000 for the further endowment of the Agricultural Colleges established under the act of Congress of July 2,

1862. The appropriation is an annual one, and increases $1,000 per year until it reaches a maximum of $25,000, after which the annual appropriation is to be $25,000. The University is the beneficiary of the act for this State. This act requires that each State shall, as a condition of receiving the benefits thereof, make provision for the instruction of colored youth in Agricultural and Mechanical science. The Legislature of this State at its recent session, established such an institution in the county of Kanawha, and appropriated $3,000 annually for the first five years, and $5,000 annually thereafter, from this fund, to assist in its maintenance. The remainder of each annual appropriation comes to the University. By the provisions of this act, the fund can be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

The Calendar.

The University year begins on the second Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall term begins on the second Wednesday of September and ends as nearly as may be three days before Christmas. A vacation of two weeks follows. The Winter term then begins and continues twelve weeks, followed by a vacation of one week. The Spring term then begins and closes with the commencement exercises.

Requisites for Admission

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Those wishing to enter any course in the Collegiate Department must stand a satisfactory examination on such studies of the Preparatory Department as are required for the course they desire to enter.

IV. Graduates of the Academic Department of the Normal School or any of its branches, or from approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue on page 12.

V. All students desiring credit for any work required in any subject taught in the Collegiate Department must ask for such credit by petition to the faculty, when first entering, and have the matter then determined by the faculty. Certificates from colleges maintaining a standard equal to that of the University are usually received in lieu of examination when the work is shown to be a real equivalent. Certificates of Normal, Academic or High Schools are not received in lieu of examination in subjects included in any Collegiate Course. They are recognized only for preparatory work, when the school has been approved by the Faculty. After a student has been admitted to a course, or as a special student, without asking credit for any Collegiate work he may have previously done, no credit can afterwards be granted for such work; nor will credit be allowed for work afterwards done, unless the same has been assigned by the Faculty.

VI. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VII. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally."

VIII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating beyond the time allowed for so doing, he will not hereafter be allowed to enroll, except by special permission of the Faculty, upon the presentation of a satisfactory explanation

Entrance Examination.

All new students are expected to be present on the day preceding the opening of the Fall Term, being for this year September 12th, in order to be examined on the studies required for admission and on those required for admission to the particular classes they desire

to enter. They should report at the President's room at the University not later than 9 o'clock A. M., on September 12th, and be by him directed to the examiners in the various branches.

ADMISSION BY CERTIFICATE WITHOUT EXAMINATION.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

APPROVED HIGH SCHOOLS.

In order to secure the higher usefulness of the University to the youth of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan:

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is a follows:

Any high school, graded school or academy may be approved by the University by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school for a term of four years. The expenses of the

committee will be paid, one-half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of 10.

5th. The Faculty reserve the right to withdraw such approval, if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who, having been found deficient after their admission, can not pass a fair test examination in the prescribed course of preparatory studies.

6th. At the expiration of the term of four years, the approval may be renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsley Institute, Wheeling; Parkersburg High School (except Greek); Western Pennsylvania Classical and Scientific Institute, Mt. Pleasant, Pa.; Normal and Classical Academy, Buckhannon, W. Va.; Greenbrier Academy, Alderson, W. Va.; Morgantown High School (except Greek); Charleston High School (except Greek).

NOTE.—In several of these schools Greek is not taught.

Admission of Female Students.

The Collegiate Department of the University is open to female students upon the same terms as male students.

Selection of Studies.

Each student in the collegiate department is required to select one of the courses of study for the bachelor's degrees, unless for sufficient reasons the Faculty allow him to enter as a special student. He is required to attend not less than fourteen and not more than sixteen recitations or other class exercises per week, and to adhere, throughout the year, to the studies selected, unless the Faculty, for sufficient reasons, allow him to attend a less number of exercises, or make an exchange of studies. Students must select their studies with reference to the printed schedules of recitations and examinations. They will not be allowed to divide hours

between classes, nor to take two subjects classed together in the examination schedules.

Special Students.

All special students in the collegiate department must pass a satisfactory entrance examination in English grammar and composition, arithmetic, geography and United States history.

The collegiate department is organized with reference to the completion by the student of a full undergaduate course of study, leading to one or the other of the bachelor's degrees. It is assumed, therefore, that students are here for this purpose, and any student seeking a special or partial course, must have special permission of the Faculty, under the following regulations:

1. No student, who is under twenty-one years of age, will be allowed to take a special course, except upon the written request of his parent or guardian.

2. In all cases, the student must submit in writing to the Faculty a statement showing the details of this special course of study he wishes to pursue, together with the purpose he has in view in selecting such course, the probable time of his attendance, and the amount and character of his previous training and acquirements.

3. In all cases, the Faculty will determine whether the reasons assigned are sufficient and the proposed course of study suited to the ability and acquirements of the applicant, and adapted to accomplish the purpose or end in view in taking it.

4. Special students will be under the same rules as candidates for degrees as to amount and character of work required, and must pass examinations with other students in their classes.

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

Other students are allowed to enter the Corps as volunteer cadets.

Text Books Issued to Cadets.

Under the laws governing the University, appointed cadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with which he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book

agent and reissued so long as they may serve the purpose of text-books.

No cadet has a right of property in any text-book issued to him while he is a cadet. If he completes a course and takes a degree, he is allowed by the Board of Regents to retain the text books issued to him, *provided* he remains a cadet until graduation. If he is discharged or resigns before graduating, *he forfeits all allowances and text-books*, which must be returned to the proper officers.

Fees.

All students, except appointed cadets, are required to pay a matriculation fee of $5.00 when entering the University. This applies to all departments.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Matriculation fee	$ 5 00
Tuition in the Law Department (per term)	8 00
Contingent fee in all Departments (per term)	2 00
Laboratory Fee in Anatomy	5 00
Laboratory Fee in Analytical Chemistry	20 00

All fees must be paid to the Treasurer, promptly on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever.

Ministerial students are admitted free, upon proper testimonials.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and tableware. One of the club

acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of thirty-six weeks.

Room rent	from	$27 00 to	$45 00
Boarding	"	63 00 to	90 00
Washing	"	9 00 to	13 00
Lights and Incidentals	"	20 00	20 00
Text-Books	"	8 00 to	30 00
Contingent Fees	"	6 00	6 00
Total		$137 00	$204 00

To this add matriculation fee of $5.00 for the first year and the tuition fees of those students who are required to pay tuition.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Examinations.

Written examinations are held in each class at the close of each term, and at such other times as each Professor may deem necessary; *provided*, such special examinations shall not interfere with other classes.

The time allowed for examination is not less than two hours, and not more than five hours.

No student will be excused for non-attendance at examination, except upon presentation of a reason which may be considered valid by the Faculty.

No student who may be absent and not thus excused, shall be allowed to continue in connection with the University.

When a student has attended the examination in any class and has failed to pass, no second examination will be allowed such student except by permission of the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10 in any subject extending throughout the whole year, who is absent, for some unavoidable cause, from the regular examinations

held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for the absence is sufficient; and, provided further, that such exemption from examination will not be allowed for more than one term in any academic year.

Grading.

Recitations and examinations are graded on a scale of ten. In order to pass from a lower to a higher class in any subject, a student must attain an average standing of 7 on a scale of 10, for each term in that class during the year.

In ascertaining the students' standing in his classes, examination marks count one-half and recitation marks one-half.

All absences from recitations are counted against the student in estimating his standing in his classes, except that any student may be excused for absences from any class, equal to one-tenth of the exercises of that class for a term, upon rendering to the Faculty a sufficient excuse, and making up the work of the class from which he was absent.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. *No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.*

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises.

A report is sent at the beginning of each year to parents and guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, the parent or gurdian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is specially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interests of the student and of his class-mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they

comply with the rules of the University and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University departments, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. A student competing for the prize shall write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.
2. All essays shall have fictitious signatures, accompanied with a sealed letter containing both the real and fictitious names.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.
4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15 00 for Declamation, will be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1892, these prizes were awarded as follows: Essay, Mr. Hough Houston; Declamation, Mr. W. R. Standiford.

Library and Reading Room.

About seven thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works of the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general literature.

A deposit of $2.00 is required of all students who wish to avail themselves of the privilege of the Library. This is intended to secure the safe keeping and return of the books borrowed.

The Library has been removed to the large room formerly used as the Chapel, and is now open every week day from 8.30 A. M. to 12 M. and from 2 to 5 P. M., for the delivery of the books and for consultation. Part of the room is used as a Reading Room, which is supplied with the leading magazines and periodicals of this country and Europe.

A large and valuable addition of books in the various departments of Science and Literature has been made to the Library during the current year.

Books of reference are not allowed to be taken from the Library; so that they are accessible for consultation at all hours.

Arrangements are also made by which books on special subjects are temporarily withdrawn from circulation when required for the use of students in any special study, or for the preparation of essays required in connection with the regular class-work.

Religious Worship.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject:

"*Resolved*, That each student will be required to attend on Sabbath the public service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Young Men's Christian Association.

A Young Men's Christian Association has been organized by the young men in the University during the past year, the principal object of which is to uphold Christianity and to promote Christian influence among all the students, and especially among those entering for the first time.

The Association meets every Friday evening from 6 to 7 in the President's office.

New students will find it to their advantage to attend this service and thereby become acquainted with the older men, who will take pains to assist them in their new surroundings.

Museum.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

Literary Societies.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticism, are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during Commencement week.

Other Societies.

THE ENGLISH CLUB.

A society formed by the students in the advanced courses in English for the prosecution of special studies on subjects requiring research, holds bi-weekly meetings on Monday evening. The original papers read before the club are type-written and bound into a volume at the close of the college year. Prizes for meritorious work are offered for competition. The Professor of English is the Director of the club.

THE ENGINEERING SOCIETY.

The success achieved by this organization is very encouraging. Its purpose is for the discussion and encouragement of engineering projects. The reading room being well supplied with engineering magazines and literature, affords the industrious student ample facilities for cultivating a general and comprehensive knowledge of engineering in all its branches.

COURSES OF INSTRUCTION

IN THE

COLLEGIATE DEPARTMENT

The courses of instruction in the Collegiate Department are stated on the next following pages. For convenient re erence, the various subjects are arranged alphabetically as follows.

Agriculture.
Ancient Languages.
Biology.
Chemistry and Physics.
Civil Engineering
English
Geology.
History.
Mathematics.
Mechanical Engineering.
Mechanics Arts.
Metaphysics.
Modern Languages.
Political Science.

Agriculture

PROF. ATKESON

1. *Elementary Agriculture.*—Two times a week throughout the first year. Recitations and lectures on soils, their origin, character and modes of cultivation. Farm economy, fences, roads, drainage, the cultivation, harvesting, preservation and marketing of farm crops. Farm law and farm accounts. Text books. "Manual of Agriculture," "First Lessons in Agriculture," "How the Farm Pays," "Success in Farming," "Bennett's 'Farm Law,'" "Book-keeping for Farmers," and collateral reading.

2. *Domestic Animals.*—Two times a week throughout the second year. Recitations and lectures on the history, development, characteristics, utility, selection and management of live stock.

A study of foods and their relation to growth, to fat, to labor and to milk. The relation between the animals and the crops of the farm. Stock breeding as an art, heredity, atavism, laws of correlation, variation and fecundity. In breeding, cross breeding, form and pedigree. Text books, "Horses, Cattle, Sheep and Swine," "Feeding Animals," "Stock Breeding" and collateral reading.

3. *Horticulture*—Two times a week through the winter and spring terms of the third year. Recitations and lectures. The scope of horticulture, general principles of propagation—by seeds, budding, grafting and layering. Fruit culture, treatment of fruit trees, pruning, gathering and storing fruits, small fruit culture, vegetable gardening, &c. Text books "Propagation of Plants" "Nursery Book," "Gardening for Profit" and collateral reading.

4. *Agricultural Science* Two times a week throughout the third year. Recitations and lectures on relation of the soil and air to plants, relation of water to the soil and its effect upon plant growth, implements, operation and efforts of tillage; the use of manures and fertilizers; history of manuring and composting; rotation of crops; action of fire on soils, green manuring; the theory and practice of grain growing, permanent pastures and hay making. Text books, Lloyd's "Agricultural Science," Storer's "Agriculture" and collateral reading.

Ancient Languages.

PROF BERKELEY.

1. LATIN.
   Fall Term—Virgil's Bucolics and Georgics. Three hours a week.
   Winter Term—Horace's Odes and Epodes. Two hours a week.
   Spring Term—Cicero de Senectute and de Amicitia. Three hours a week.

2. LATIN.—*Three hours a week throughout the year.*
   Fall Term—Livy; Wilkins' Roman Literature.
   Winter Term—Horace's Satires and Epistles.
   Spring Term—Cicero de Officiis.

2. LATIN —*Three hours a week throughout the year.*
   Fall Term—The Agricola and Annals of Tacitus.
   Winter Term—The Annals of Tacitus (continued.)
   Spring Term—Juvenal.

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the

language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—Harper's or White's

4. GREEK.

Fall Term - Herodotus. Two hours a week.
Winter Term—Homer's Iliad. Three hours a week.
Spring Term - Homer's Odyssey. Two hours a week

5. GREEK.—*Three hours a week throughout the year.*

Fall Term—Xenophon's Memorabilia; Jebb's Greek Literature.
Winter Term—Plato's Apology and Crito.
Spring Term—Euripides.

6. GREEK—*Two hours a week throughout the year.*

Fall Term—Demosthenes.
Winter Term—Sophocles.
Spring Term—Thucydides.

As mentioned above, in the case of the Latin Language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading.

Lexicon Recommended for each Class—Liddell and Scott's.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin according to the so-called Roman method.

Candidates for the degree of Bachelor of Arts are allowed to substitute one year of French for Latin 3 and one year of German for Greek 6, or two years of either for both Latin 3 and Greek 6.

Biology.

PROFESSOR HARTIGAN.

1.—FIELD BOTANY. Two hours.

This class meets twice a week during the Winter and Spring terms.

The Winter term is devoted to the study of the text, which is expanded by lectures from time to time, while the Spring term is given to practical work in the analysis of flowers. Examinations are held at the end of each term, and in addition to the practical work done in the class room and field, each student is required to prepare an herbarium of one hundred specimens. Text is Wood's Botanist and Florist. In analysis, Wood, and the Systems of Gray and Kellerman.

2.—STRUCTURAL BOTANY. Two hours.

Two hours a week are given to this subject during the Fall and Winter terms. The Fall term is given to the study of general plant Anatomy and Physiology; and the Winter term to the special consideration of these subjects, students being instructed in the practical use of the microscope in the study of Plant Histology. Bessey's Structural Botany is the text used. For reference, Gray, Sachs, Crookshank's Bacteriology, Bentley, Cooke.

3.—ZOOLOGY. Three hours.

Three hours per week are provided for this subject during the Fall and Winter terms. The fall term is given to the study of comparative Zoology. This part of the course is mainly by lectures. The Winter term is devoted to the study of Systematic Zoology, Embryology, and Histology. The students are instructed in the use of the microscope, and are required to use it in their investigations each day in the class room. Members of this class are required to skeletonize five vertebrate animals, as practical work. The text in this course is Orton's Zoology, with the works of Darwin, Haeckel, Spencer, Packard and Claus for reference.

4.—PHYSIOLOGY AND HYGIENE. Five hours.

This course is entirely by lectures, and no special work is used as a text, though any standard work is recommended for collateral reading. Five hours weekly are provided for this course during the Spring term. Books recommended for reading are: Flint's Human Physiology, Yeo's Manual, Kirke, Dalton. In Hygiene—Huxley and Youman, Wilson, Parks.

5. HUMAN ANATOMY. Five hours.

Five hours weekly are given to this subject during the Fall and Winter terms. The course is entirely by lectures, and is designed as a special course in this branch for those desiring to prosecute the study of Medicine and Surgery. The skeleton or cadaver will furnish the proper text of each lecture, though models, manikins, specimens and charts will be used when necessary to elucidate any special subject.

Students in this course are required to dissect three parts of the human body and to be examined thereon. The dissecting room is open each evening from 7 till 10 o'clock, and all the students are required to be present. At the end of the Winter term students of this class enter the class in Human Physiology (Course 4).

Keene's Edition of Gray's Anatomy is the text used.

NOTE. Special certificates in courses 4 and 5 are accepted by leading Medical Schools of the country, as equivalent for the same subjects required by them for the degree of M. D., and all students entering these courses, with the view of obtaining such certificates must pass an examination in preparatory Latin and second year English,

and if not prepared, on entrance, to take such examinations, they will be required to pursue these studies during the year in connection with the above courses.

6. MICROSCOPY. Two hours a week.

This course is elective. Instruction is given in Microscopical technique, Vegetable and Animal Histology and Bacteriology. The principles of staining. Germ Culture, Methods of Analysis of air and water are studied as applied in Practical Hygiene. The course is by lectures and practical laboratory work.

Chemistry and Physics.

PROF. WHITEHILL.

1. PHYSICS Three hours a week.

In *Physics*, as a preparation for after study, the leading principles of Mechanics are studied during the Fall term During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced throughout the course, and the modern doctrines of Molecular Physics are fully explained.

2. ADVANCED PHYSICS Two exercises a week.

This course is open to students who have taken the course of General Physics in the University, and who have sufficient mathematical knowledge for the discussion and investigation of problems in higher Physics. In connection with the theoretical work, practical work is undertaken in dynamics, sound, heat and light, and the elements of electrical engineering receive attention.

3. CHEMISTRY. Three hours a week.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Inorganic Chemistry, and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

4. ANALYTICAL CHEMISTRY. Five times a week.

In *Analytical Chemistry*, facilities are provided for systematic instruction in qualitative analysis, and for general practice in experi-

mental work. Members of the class are supplied with the necessary apparatus and chemicals and are required to spend from one to two hours daily in the laboratory. This course includes the preparation of some of the more important gases and salts and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work. During the Spring term especial attention is directed to some of the more important medical preparations and to the analysis of waters; and an elementary course in qualitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in any elementary work on the subject named.

Apparatus.

Students in the several classes have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Atwood's Machine, Pelton's water motor, 4 Troemer balances, Jolly balance, Brush dynamo, 2 Ruhmkorff coils, Holtz and plate electrical machines with accessories, Leyden and Galvanic batteries, electrical testing set, resistauce coil, ampere ond volt metres, galvanometers, Perret electric motors, Geissler, Crookes and Plucker tubes, telegraphic instruments, telephone, microscope, 2 spectroscopes, polariscope, colorimeter, heliostat, 2 air pumps with accessories, siren sonometer, manometric flame apparatus, radiometer, optical lantern, plane, convex and concave mirrors, graphoscope, kaleidoscope, stereoscope, meteorological instruments, apparatus for electroplating and gas analysis, combustion furnaces, photographer's outfit, models, levers planes, pulleys, pendulums, etc.

The method of instruction is by text books, lectures and experiments Each course requires one year for its completion.

Civil Engineering.

COURSES BY PROF. DAVENPORT.

1. SURVEYING; Land surveying. Recitations and field work.
   Fall Term—Four times per week. Gillespie.

2. SURVEYING; Trigonometric surveying. Adjustment of instruments; use of barometer; leveling &c.
   Spring Term—Four times per week. Gillespie; Johnson.

3 MECHANICS Analytic mechanics. Recitations.
   Fall Term—Four times per week. Bowser.

4. MECHANICS. Analytic mechanics, continued.
Winter Term—Four times per week. Rankine.

5. MECHANICS. Applied mechanics. Resistance of materials.
Spring Term—Four times per week Wood; Burr.

6. MECHANICS. Roofs and bridges.
Fall Term—Four times per week. Merriman; Burr.

7. MECHANICS. Hydraulics.
Winter Term. Four times per week. Merriman; Bowser.

8. GEODESY. Geodetic surveying and the projection of maps.
Winter Term—Two times per week. Syllabus of the professor.

9. METALLURGY. Iron and Steel. Lectures and recitations.
Winter Term—Three times per week. Greenwood; Thurston.

10. FIELD PRACTICE. Chain and compass surveying. Hydrographical, topographical, and town surveying. Practical use of transit, level, and theodolite.
Fall Term—Four hours per week

COURSES BY PROFESSOR JOHNSTON

11. ROADS AND RAILROADS.
Fall Term—Four exercises per week.
Theory and practice of road and railroad location and construction, railroad surveys, curve tracing &c. Searles, Gillmore.

12 FIELD PRACTICE. For junior and senior students.
Fall Term—Four hours per week
Instrumental work, locating the line, staking out work, making the profile, establishing the grade &c.

13 MINING.
Fall Term—Three exercises per week.
Drawing, ventilation of mines, construction of plant, shafting, coke ovens &c. Ihlseng, Andre.

14. MATERIALS OF ENGINEERING
Winter Term—Three exercises per week.
Engineering construction, foundations, limes, mortars and cements, wood, stone and concrete, piles and pile driving, hoisting apparatus, tunnelling, &c. General engine ring. Mahan, Trautwine.

45. ROAD AND RAILROAD ECONOMY.
Spring Term—Three exercises per week.
The economic problems of the location, construction and maintenance of roads and railroads; the economy of grades, curvature, distance &c. Wellington.

16. ARCHITECTURE.

Spring Term—Three exercises per week.

Ancient and modern architecture studied and compared. Lectures on modern architecture, its customs, appliances, heating, ventilation, sanitation &c Bullock, Ferguson, Ruskin.

17. DESCRIPTIVE GEOMETRY.

Winter Term— Four exercises per week.

Common and isometric projections, principles and problems relating to the point, line, plane, cylinder, cone and double curved surfaces of revolution The intersection of planes and solids and their development, warped surfaces, shades and shadows. Faunce. Warren.

18. STEREOTOMY.

Fall Term —Two exercises per week

Stone cutting, making patterns, models, &c. Warren.

19. FIELD PRACTICE. For junior and senior students.

Spring Term—Four hours per week.

Field corps work, road and railroad surveying, river, harbor and city surveys, levelling, barometric leveling, railroad reconnaissance, slope staking, masonry and earthwork. Searles, Trautwine.

20. FREE HAND DRAWING.

Fall Term—Two exercises per week, 2 hours each.

Drawing from the model. Study of dimensions.

Winter Term—Sketching, proportion, grouping, &c., lettering, shading, perspective.

Spring Term—Industrial drawing; detail sketching, isometric and perspective. Flat colors. Proportion.

21. INSTRUMENTAL DRAWING

Winter Term—Two exercises per week, 2 hours each.

Platting, plan drawing, applications from descriptive geometry, &c

Spring Term—For mechanical engineering course only.

Detail working plans, machinery construction, belts, pulleys, cogging &c.

22. MECHANICAL DRAWING.

Fall Term—Two exercises per week, two hours each.

Plane drawing, mapping the survey, foundations, buildings and topographical drawing, &c.

Winter Term—Machinery construction. Detail working plans &c.

Spring Term—Detail working plans, engineering construction &c.

NOTE.—All students taking a course in drawing are required to supply themselves with the necessary drawings instruments and

materials. For the class in free hand drawing for the Fall Term, a set of artist's pencils, rubbers, &c. For the Winter and Spring terms, a scale, wooden angles, straight edge, &c., are required. The entire cost of paper and materials need not exceed three dollars.

Students in advanced classes in drawing are required to supply themselves with good drawing paper, a drawing board, protractor, compasses, bow pen and pencil, drawing pen, pair of triangles, scale, straight edge, thumb tacks, ink and water-color brushes, &c., the cost of which will vary from eight to twelve dollars.

Students in the engineering courses have access to and free use of a large number of costly instruments and much valuable apparatus. Any one losing, breaking, or damaging any such property through carelessness or negligence, will be held responsible for such loss or damage.

English.

PROF. OGDEN.

1. ENGLISH LANGUAGE AND LITERATURE.

History and growth of the English Language and Literature. Three hours weekly, Tuesday, Thursday and Friday—11:30 A. M.

The first half year is given to the history and philological study of the English language, using as texts: The professor's Syllabus, Sweet's Anglo Saxon Primer, Morris's Chaucer's Prologue, Lounsberry's History and Earle's Philology.

The second half year is devoted to a synoptical view of the content and history of English literature, using as texts: The professor's Syllabus, Winchester's Short Courses of Reading, any good manual of English and American Literature, and for collateral reading Ward's English Poets, Craik's English Prose, Writer's and critical editions of English classics

In each half year the student submits two essays on assigned topics, connected with the subject matter of the course.

Instruction is by lectures, with frequent quizzes and review examinations on the lectures, assigned texts and collateral readings.

2. RHETORIC.

Two hours weekly. Monday and Friday—9:30 A. M. Texts: The professor's Syllabus, Genung's Rhetoric and Rhetorical Analysis and Gummere's Poetics. Frequent practical exercises in essay writing and analyses of themes are required throughout the year, and in addition each student submits in each half year, a paper giving the results of individual study on an assigned topic related to the subject matter of the course.

Instruction is by lectures, recitations, review examinations and class discussions.

3. ENGLISH LITERATURE AND LITERARY CRITICISMS.

Two hours weekly, Tuesday and Thursday 10:30 A. M. This course is introduced by lectures on the province, purposes, and principles of literary criticism, which are followed by a series of studies of selected authors and periods of English literature.

The class work, in the first half year, is given to English prose and prose writers, using as texts: The professor's Syllabus, Minto's Prose Writers and Garnett's Selections and for reference, Hunt's and Earle's Treatises and Craik's English Prose Writers.

The second half year is devoted to the study of English poetry, using as a text the professor's Syllabus, and for reference, Minto's and Stedman's treatises, Ward's English Poets and the works of Spenser, Shakespeare, Milton, Wordsworth and Browning.

During the year each student prepares and reads at the lecture hour or in a class conference, three critical papers; the first on the life and writings of a designated prose writer; the second on the life and writings of a designated poet; and the third on the writers and their works of some designated age, epoch, class, school or period in English literature.

Instruction is by lectures, class discussions and reports on collateral reading.

To enter this course, students must have passed in courses 1 and 2.

4. ANGLO-SAXON. *Elective.*

Two hours weekly, Tuesday and Thursday. Texts: Sweet's Reader, Library of Anglo Saxon Poetry, (Ginn & Co.) and Brooke's History of Early English Literature. The relation of Anglo-Saxon to Modern English, and the domestic life, manners, customs, institutions, laws and government of the first English people are treated in special lectures. To enter this course students must have passed in Course 1.

5. EARLY AND MIDDLE ENGLISH.—*Elective.*

Two hours weekly. Monday and Wednesday, 10:30 A. M. Texts: Morris & Skeat's Specimens of Early English, Skeat's Ed. of Chaucer, and Mayhew & Skeat's Middle English Dictionary.

This course is open only to those who have passed in Course 4.

6. AMERICAN LITERATURE.—*Elective.*

Two hours weekly. Monday and Wednesday, 11:30 A. M. Instruction is by lectures, special studies of American authors and class discussions with Richardson's American Literature and Stedman's Poets of America as texts.

This course is open to those who have passed in Course 3.

Geology and Mineralogy.

PROFESSOR BROWN.

1. GENERAL GEOLOGY. Dynamical and Historical.

Two hours a week, Tuesdays and Thursdays, throughout the year.

This course is open to all students who have attained proficiency in Chemistry and Botany, and is required of all candidates for the degree of A. B.

2.—STRATIGRAPHIC AND ECONOMIC GEOLOGY.

This course continues throughout the year and is required of the Scientific and Engineering students.

In the case of Engineering students, proficiency in Chemistry only is required before entering In the Fall Term this class, if not too large, may meet with the general class in Course 1

In the Winter and Spring Terms it meets on Mondays and Fridays.

3.—MINERALOGY.

Winter Term—Two exercises a week.

This course is open to all. but is required of Engineering students. The work will be mostly practical, and will consist of minute examinations of hand specimens of the various minerals, and of blowpipe and acid tests of many of them.

4.—LITHOLOGY.

Spring Term—Two exercises a week.

This course is elective, and is open to all who have taken course 3.

The work will consist of the examination of rocks and rock making materials with particular reference to the qualities of our various building stones.

Examinations of thin rock sections by microscope and the preparation of slides for same will be included.

5 —PHYSICAL GEOGRAPHY.

Elective course; two hours a week, throughout the year.

Numerous excureions to the country will be made with the students during the Fall term.

In the Spring term this subject will be taught principally by lectures upon the relation of Physical Geography to human history.

6 —An advanced course in Economic Geology will be offered to students who have completed course 2.

This course will occupy two hours per week during the Fall term.

During the winter term students electing this course will take course 3, and during the Spring term course 4, thus making a full elective course of 2 hours per week throughout the year.

This elective will be open to students who have taken courses 1 and 2.

Excursions.

Local excursions, on Saturdays especially, will be made by the regular classes during the Fall and Spring Terms, and during the

Spring vacation of each year, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivaled facilities for the study of all problems connected with this useful science, and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific course of the University, but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

History.

PROF. REYNOLDS.

The course of instruction in this subject is directed to two main purposes. 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study extends through the year, the class reciting two hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text books are Myers' Histories, with reference to standard works on the History of the nations and periods studied.

Mathematics.

PROF. STEWART.

1.—UNIVERSITY ALGEBRA, SOLID GEOMETRY, TRIGONOMETRY, ANALYTICAL GEOMETRY. Four hours a week throughout the year.

Fall Term.—Wells' University Algebra, beginning at logarithms completed. (First seven weeks.)

Wells' Solid Geometry, completed. (Second seven weeks.)

Winter Term. Trigonometry—Wentworth's.

Spring Term. Plane Analytic Geometry—Wentworth's.

Students are required to pass an examination in University Algebra through undetermined co-efficients and in Plane Geometry, in order to enter Course 1.

2.—ANALYTIC GEOMETRY. CALCULUS.

Three hours a week throughout the year.

Fall Term. Solid Analytic Geometry, Calculus—Taylor.

Winter Term. Differential Calculus, Curve Tracing.

Spring Term. Integral Calculus, Rectification of Curves.

Course 1 is required to enter this course.

3.—ASTRONOMY.

Two hours a week throughout the year—Young's or Newcomb's.

Mechanical Engineering.

PROF. ALDRICH.

1.—ELEMENTS OF MECHANISM.

Spring Term.—Four exercises per week, recitations; one hour sketching.

Elements, pairs and trains of mechanism; classification of Reuleaux and Willis; relative, comparative and constrained motion.

2.—WORKSHOP APPLIANCES.

Throughout the Year.—One exercise per week, recitations and lectures.

Principles of design and construction of modern machine tools and shop appliances, small tools and jigs; standard reference tools and measures; adaptation of cutting tools to material and work; workshop equipment.

3.—MACHINERY AND MILLWORK.

Fall Term.—Three exercises per week, lectures and recitations.

Mechanics of Machinery; friction, work and efficiency; the mechanism and machinery of transportation and power transmission; distribution of power in manufacturing plants.

4. POWER.

Fall Term.—Two exercises per week, lectures

The generation, storage, systems of transmission, distribution and measurement of power; economic considerations.

5.—THERMODYNAMICS.

Fall Term.—Four exercises per week, recitations and lectures.

Mechanical theory of heat; thermodynamics of steam and other heat engines,—gas, vapor and petroleum engines; air compressors and motors; refrigerating machinery.

6.—STEAM ENGINEERING.

Winter Term.—Four exercises per week, lectures and recitations.

Fuels, combustion, generation and use of steam; historical development and comparative study of steam engines, boilers and accessories; mechanism of valve gears and governors, injectors, steam pumps and condensers; selection of type best adapted to given work, elements of design, details of construction, installation, management and testing; economics of steam making and steam using; heating and ventilating systems.

7.—HYDRAULIC MACHINERY.

Winter Term.—One exercise per week, lectures.

Water pressure engines, turbines, water wheels, pumps and pumping machinery, accumulators, cranes and hydraulic machine tools.

8.—WORKSHOP ECONOMY.

Spring Term.—Three exercises per week, lectures and readings.

Economics of construction of power and manufacturing plants, cost of power and of manufactures, shop order systems and cost accounts.

9.—JOURNAL MEETING.

Throughout the year.—One hour per week.

The literature of engineering, journals, periodicals, proceedings of societies, engineering precedents, ethics, economics and data of engineering practice.

10.—DESIGNING MACHINERY.

Throughout the year. Two exercises per week, lectures and recitations; one exercise (three hours) in practical designing. Thesis work.

Mechanism and machinery for the transmission and distribution of power; special manufacturing machinery. Steam and hydraulic machinery and accessories. Power and manufacturing plants, motive power, machinery, special plant appliances, heating, ventilation, fire protection; plans, specifications, estimates and contracts.

11.—MECHANICAL LABORATORY.

Throughout the Year.—One exercise (three hours) per week, third year.

Two Exercises—(Six hours) per week, fourth year.

Principles of design, construction, adaptation and calibration of standard engineering instruments for the measurement of temperature, pressure, speed, length, area, volume, weight and power. Qualitative and quantitative measurements. Experimental work in testing materials of construction, value of lubricants, efficiency

of mechanisms and the machinery of transmission, performance of shafting and belts under load, balancing, reciprocating and rotating bodies. Value of fuels, quantity and flow of steam, performance of steam engines, boilers, injectors, pumps, gas and vapor engines, air compressors, motors and blowers, flow and discharge of water, testing turbines and hydraulic motors, duty of pumps and injectors. Testing dynamos, motors, and power plants. Keeping records of tests, use of calculating instruments, final reports, Thesis work.

Mechanic Arts.

PROF. ALDRICH, DIRECTOR.

1.—WOODWORKING.

Fall and Winter Terms.—Two exercises (3 hours each) per week.

Carpentry joinery and bench work; exercises with the fundamental edge tools on hard and soft woods, in different directions with respect to the grain; quality and strength of commercial woods; fastenings for woodwork; fittiug cabinet and builders' hardware; matching, beading and moulding; simple framing and mitre joints: joinery and jointed framing, fitting woodwork, straight and angle joints; finishing surfaces; principles of construction and sharpening tools; project work.

Fall and Winter Terms.—One Exercise (three hours) per week.

Wood turning and use of woodworking machine tools; turning fundamental geometric forms in hard and soft woods, plain and stepped cylinder, single and double cone, concave and convex beading, reversed curves, and combinations of these in the production of simple turning projects; boring, chucking, face-plate work; finishing and polishing Exercises on planer, jointer, buzz saw, jigsaw, and band-saw.

Spring Term—Two exercises (3 hours each) per week.

Pattern-making; application of the foregoing instruction in its relation to pattern-making for machine construction; draft, shrinkage, finish; parting patterns; cores and core boxes, flask and moulding board; simple draw patterns, turned patterns, typical forms of machine elements and patterns for work to be executed later in the machine shop.

2.—MOULDING AND CASTING.

Spring Term—One exercise (three hours) per week.

Preparation and use of moulding sand, facing, parting, making cores, drying, venting, location of gates and risers; use of typical moulder's tools and appliances; making castings from exercise patterns and from those for machine shop exercises and construction.

3.—FORGING.

Fall and Winter Terms—Two exercises (three hours each) per week.

Iron and steel forging; drawing out and sizing; quality of iron,

cutting, bending, twisting, punching, splitting, forming, use of flatter, fuller, set and swager; welding iron, scarfed, lap, tongue and butt welds; exercises in jointing and fitting and combinations of elements; working steel, forging, tempering, annealing, case-hardening; tool-smith's work, making tools to be used later in the machine shop, using typical steels for the typical tools, working coal and gas forges.

4.—TIN-SMITHING.

Spring Term—One exercise (three hours) per week.

Tin, sheet-iron and copper, soft and hard soldering, brazing, tinning, forging and care of coppers, seamless and solder joints in typical geometric forms.

5.—PIPE-FITTING. Boiler work.

Spring Term—One exercise (three hours) per week.

Cutting pipe, threading, fitting sleeves, nipples, tees, ells, plugs, bushings, unions and valves, bending and coiling pipe, making joints and use of packing in screw and flange connections; making joints and fitting connections in lead pipe. Cutting pipe and bolt holes in boilers, making screwed and flanged connections to boiler; ratchet drilling, soft and hard patches, tank, boiler and truss riveting, caulking and tube expanding.

6.—MACHINE SHOP WORK.

Fall Term—Two exercises (3 hours each) per week.

Ironwork at the bench; chipping, filing, scraping, fitting, polishing, bevelling, chamfering, key-seating; laying out and gauging work, fitting interior and exterior surfaces, right and oblique angles, formatiou of a straight edge and a surface plate, use of machinists' small tools, bench work in brass.

Winter Term—Two exercises (3 hours each) per week.

Ironwork at the bench; continuation of the work of the Fall Term in more difficult exercises; work in wrought iron and annealed steel; formation of standard measuring instruments and gauges and machinists' small tools.

Fall and Winter Terms—One exercise (three hours) per week.

Handwork with machine tools, drilling, tapping, screw-cutting with taps, dies and chasers; hand turning in metal, using soft metal, brass, cast iron and wrought iron; care and construction of edge tools for metal working.

Spring Term—Three exercises (3 hours each) per week.

Machine tools; drill press, lathe, shaper, planer, emery grinding, milling machine, turret lathe work; the construction, care and use of edge tools, as adapted to the material, kind of work and output. Production of finished machine elements and projects, and reproduction of typical details of the shop tools and machinery; interchangeable work. Performance of machine tools, efficiency of output.

7.—ATTENDANCE.

Throughout the Year—Time to be assigned for each student.

Each student will be detailed at various times during the year for duty on the following stations: Steam boiler, steam heating and ventilating apparatus and blowers, steam engine, transmission machinery, and tool room.

At each of these stations the students will keep a log or record of the condition, performance or output, as the case may be, of that of which he has been put in charge. Thus: (1) boiler log,—weight of coal and water, pressure of steam, gas supply service water, air draft, temperature of chimney gases and of service and feed water; (2) steam-heating and air data—pressure of forge blast and exhaust, of hot air in pipes and of steam in heater, temperature of the outside and inside air, of the hot air and steam; speed of blowers and fans; (3) Steam-engine log—speed and indicator cards and performance of the engine; (4) transmission machinery, speeds,—condition of pulleys, belts, clutches and couplings, and reports; (5) tool room—condition of stock, supplies, tools, standard gauges, maintain the order and efficient condition of the tool room, and report.

8.—MACHINE CONSTRUCTION.

Throughout the Year—Two exercises (3 hours each) per week.

Building, assembling and erecting machinery; reproduction of shop machine tools and work from original designs; lining, leveling, locating bearings and hangers; running line of shafting, putting up pulleys and belts; setting up machinery, construction of motive power machinery and accessories; making special apparatus for for shop and mechanical laboratory.

Metaphysics.

PROF. REYNOLDS.

1.—ELEMENTARY COURSE.

This course will take three hours per week, Monday, Wednesday and Friday, at 8:30, through the year, and includes the elements of Psychology, Logic, deductive and inductive, and Ethics. Required in all courses for degrees.

2.—ADVANCED COURSE IN PSYCHOLOGY.

This course will take three hours per week, Monday, Wednesday and Friday at 11:30 throughout the year, and will include studies in Physiological, Comparative and Historical Psychology, and Mental Evolution. Required for degree of Bachelor of Arts.

3. ADVANCED COURSE IN LOGIC.—*Elective.*

This course will take two hours per week, Tuesday and Thursday, at 11:30 throughout the year, and will include studies in Formal and Inductive Logic, Principles of Science and Scientific Methods.

4. ADVANCED COURSE IN ETHICS.—*Elective.*

This course will take two hours per week, Tuesday and Thursday, at 8:30 throughout the year, and will include studies in Natural Ethics and the Science of Religion.

Instruction is given in all these courses by text-book recitations, lectures, essays and special reading. The latest and best works used for reference.

Modern Languages.

PROF. HARVEY.

1.—FRENCH. Five times per week throughout the year.

Fall Term—Whitney's Edgren's Grammar. Super's Reader.

Winter Term—Grammar continued. Reader finished.

Spring Term.—Grammar continued. Souvestre's Philosophe sous les Torts, or selections from modern authors.

2.—FRENCH. Three times per week throughout the year.

Fall Term—Erkmann-Chatrian's Madame Therese, or other selectfons, grammar and composition.

Winter Term—Corneille's Le Cid, Racine's Esther, Moliere's L'Avare, grammar and composition.

Spring Term—Hugo's Hernani or Ruy Blas, or other selections, Saintbury's French Literature.

3.—GERMAN. Five times perweek throughout the year.

Fall Term—Joynes-Meissner's or Hempl's Grammar; Joynes' Reader or Super's Andersen's Maerchen.

Winter Term—Grammar continued. Reader finished.

Spring Term—Grammar continued. Schiller's Jungfrau von Orleans or Wilhelm Tell, or other selections.

4 GERMAN. Three times per week throughout the year.

Fall Term—Gutzkow's Zopf und Schwert, or Lessing's Minna Von Barnhelm, grammar and composition.

Winter Term—Goethe's Iphigenie or Herman and Dorothea, Grammar and Composition.

Spring Term.—Lessing's Nathan der Weise, or Riehl's Culturgeschichtliche Novellen, Taylor's German Literature.

In courses 1 and 3 the classes are drilled in the etymological forms and in the simpler forms of syntax. Frequent exercises are required of all classes. Besides the regular class-room work an extra private course in reading will be prescribed and required in courses 2 and 4.

Political Science.

PRESIDENT TURNER AND PROFESSOR BROOKE.

1.—POLITICAL ECONOMY.—*Elementary Course.*

Fall Term.—Two hours per week. Text: Walker's Elementary Work.

PRESIDENT TURNER.

2.—POLITICAL ECONOMY.—*Advanced Course.*

Two hours per week throughout the year.

Special study of problems of present interest. Text book and lectures.

Elective for seniors.

PRESIDENT TURNER.

Course 1 must be taken before this course

3.—ELEMENTARY COURSE IN CIVIL GOVERNMENT.

Spring Term —Two hours per week. Text: Fiske.

Required of students in Agricultural course: Optional to others.

PRESIDENT TURNER.

4.—CONSTITUTIONAL AND INTERNATIONAL LAW.

Two hours per week throughout the year.

PROF. BROOKE.

Elective for Seniors.

REQUIREMENTS FOR GRADUATION

IN THE

COLLEGIATE DEPARTMENT.

Five regular courses of study are offered in the Collegiate Department, leading to the degrees of

Bachelor of Arts,
Bachelor of Science,
Bachelor of Science in Civil Engineering,
Bachelor of Science in Mechanical Engineering,
Bachelor of Agriculture

Each of these courses, except the course in Agriculture, requires four year for its completion.

The details of the requirements for these degrees, and of the courses of study for each of them, are given in subsequent pages.

Three original performances are required of all candidates for Bachelor's Degrees, during each of the last two years of the course.

Requirements for Admission

To enter any one of these courses, the student must have completed the course of study required for that course; *provided*, that students who have not completed all the preparatory studies will be required to take first, the studies of the preparatory department in which they are deficient; and, in addition to these, they may take such studies in the collegiate courses of study as they are prepared to take under the advice of the Faculty.

The preparatory course of study will be found in the latter part of this catalogue, under the head of the Preparatory Department.

Any applicant for admission to any one of the courses for degrees who has gone over any part of the course before coming to the University, and desires credit for the same, must present his application for such credit to the faculty upon entering, in order that the faculty may then determine whether, and upon what conditions, he is to be given credit for such work. In ordinary cases, certificates from colleges maintaining a standard equal to that of the University, are accepted in lieu of examination for such advanced

work. The certificates of Normal schools, High schools or Academies are not accepted for collegiate work. In such cases the student must be examined, or otherwise satisfy the Faculty of his proficiency in the subject for which credit is asked. Credit cannot afterwards be granted for work outside of that done in the University classes and assigned by the faculty.

Course for the Degree of Bachelor of Arts.

This course corresponds to the usual "classical" course in most colleges. The distinctive feature of it is the study of Latin and Greek, which are both required for the degree of Bachelor of Arts. The last year of the course is almost entirely elective, enabling the student to adapt his work to his future aims in life. To enter this course the student must have completed the course of study in the preparatory department, or its equivalent, except Book-keeping.

[NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under under that name in the "Courses of Instruction," beginning on page 21, the description of that course will be found. When a bracketed and italicised title follows the name of a study the description will be found under the bracketed title. The other figures indicate the number of exercises per week].

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Latin [*A. Lang.* 1]	3	Latin [*A Lang* 1]	2 or 3.	Latin [*A. Lang.* 1]	3 or 2
Greek [*A. Lang.* 4]	2	Greek [*A. Lang* 4]	3 or 2.	Greek [*A. Lang* 4]	2 or 3
Mathematics (1)	4.	Mathematics (1)	4	Mathematics (1)	4.
Physics [*Chem & Phys.* 1]	3.	Physics [*Chem & Phys.* 1]	3.	Physics [*Chem. & Phys.* 1]	3.
English (1)	3	English (1)	3	English (1)	3.

SECOND YEAR

Fall Term.		*Winter Term.*		*Spring Term.*	
Latin [*A. Lang.* 2]	3.	Latin [*A. Lang.* 2]	3.	Latin [*A. Lang.* 2]	3.
Greek [*A. Lang.* 5]	3.	Greek [*A Lang.* 5]	3.	Greek (2) [*A Lang.* 5]	3.
History	2.	History	2	History	2.
English (2)	2.	English (2)	2.	English (2)	2.
Chemistry [*Chem. & Phys.* 3]	3.	Chemistry [*Chem. & Phys.* 3]	3	Chemistry [*Chem. & Phys.* 3]	3.
Polit Science (1)	2.	Field Botany [*Biology* 1]	2.	Field Botany [*Biology* 1.]	2.

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics	3.
[*Metaphysics* 1]		[*Metaphysics* 1]		[*Metaphysics*]	
Geology (1)	2.	Geology (1)	2.	Geology (1)	2.
Zoology	3.	Zoology	3.	Phys and Hyg.	5.
[*Biology* 3]		[*Biology* 3]		[*Biology* 4]	
English (3) or (4)	2.	English (3) or (4)	2.	English (3) or (4)	2.

Original performances, four.

Elective.—An election is given during this year and the following year, between the Ancient Languages, Courses 3 and 6, and Modern Languages, Course 3 this year, and Course 1 or Course 4 in the Senion year; also, in this year, between English (3) and English (4). *Both cannot be taken this year.*

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Metaphysics (2)	3.	Metaphysics (2)	3.	Metaphysics (2)	3.
German or French	3 or 5.	German or French	3 or 5.	German or French	3 or 5.
[*Mod. Lang.* 3 *or* 1]		[*Mod. Lang.* 3 *or* 1]		[*Mod. Lang.* 3 *or* 1]	

Three original performances.

Electives—From the courses given below, the student must select enough work to make with the above, fifteen exercises per week throughout the year.

French	5.	Biology (5)	5.	Physics (2)	2.
German	5 or 3.	Metaphysics (3)	2.	Biology (6)	2.
A Lang. (3)	2.	Metaphysics (4)	2.	Astronomy	2.
A. Lang. (6)	2.	Polit. Science (2)	2	[*Mathematics* 3]	
English (5)	2.	Polit. Science (4)	2.	Geology (5)	2.
English (6)	2.				

English (3) or English (4) may also be elected, if not taken in the 3rd year.

BACHELOR OF ARTS COURSE. WEEKLY SCHEDULE. FIRST YEAR

TERM.	HOUR.	MONDAY.	TUESDAY	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	*Physics:* Mechanics.		*Physics.* Mechanics.		*Physics.* Mechanics.
	9½	*Greek*, Herodotus, Gr. Prose Comp.	*Greek.* Herodotus; Gr. Comp.	*Greek.* Herodotus; Gr. Comp.	*Latin.* Virgil; Comp.	*Latin.* Virgil; Comp.
	10½	*Math.* Algebra.	*Math.* Algebra.	*Math.* Geometry.	*Math* Geometry.	
	11½		*Engl. Lang.*		*Engl. Lang.*	*Engl. Lang.*
WINTER.	8½	*Physics* Electricity, Magnetism. Sound.		*Physics.* Electricity, Magnetism, Sound.		*Physics.* Electricity, Magnetism. Sound.
	9½	*Greek:* The Iliad; Exercises.	*Greek.* The Iliad; Exercises.	*Greek:* The Iliad; Exercise, or *Latin*, Horace.	*Latin.* Horace, Odes; Exercises.	*Latin.* Horace, Odes; Exercises.
	10½	*Math* Trigonometry.	*Math.* Trigonometry.	*Math.* Trigonometry.	*Math* Trigonometry.	
	11½		*English Lang. & Lit.*		*English Lang. & Lit.*	*English Lang & Lit.*
SPRING.	8½	*Physics.* Heat. Light		*Physics.* Heat, Light.		*Physics.* Heat, Light.
	9½	*Greek.* The Odyssey; Exercises.	*Greek.* The Odyssey, Exercises.	*Latin.* Cicero de Senectute, &c.; Exercises.	*Latin.* Cicero. de Senectute, &c.: Exercises	*Latin.* Cicero de Senectute, &c.: Exercises.
	10½	*Math.* Analyt. Geom.	*Math* Analyt. Geom.	*Math.* Analyt. Geom.	*Math.* Analyt. Geom.	
	11½		*English Literature*		*English Literature*	*English Literature.*

SECOND YEAR.

FALL.	8½	*Greek.* Xenophon's Mem. Exercises.	*Greek.* Xenophon's Mem. &c	*Latin.* Livy: Rom. Lit.	*Latin.* Livy; Rom. Lit.	*Latin.* Livy: Satire.
	9½	*Rhetoric.* Essays.	*History.*		*History.*	*Rhetoric:* Essays.
	10½			*Greek.* Plato's Apology.		
	11½	*Chemistry* Inorganic.	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Polit. Economy.*	*Polit. Economy.*
WINTER	8½	*Greek.* Plato's Apology: Exercises.	*Greek.* Plato's Apology; Exercises.	*Latin.* Horace; Satires.	*Latin.* Horace; Satires.	*Latin.* Horace; Satires.
	9½	*Rhetoric.* Essays.	*History*		*History.*	*Rhetoric:* Essays.
	10½			*Greek.* Xenophon's Ex.		
	11½	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Chemistry.* Inorganic.	*Field Botany*	*Field Botany.*
SPRING.	8½	*Greek.* Euripides: Exercises.	*Greek.* Euripides.	*Latin* Cicero de Officiis.	*Latin.* Cicero de Officiis.	*Latin.* Cicero de Officiis.
	9½	*Rhetoric: Essays.*	*History.*		*History.*	*Rhetoric:* Essays.
	10½			*Greek.* Euripides.		
	11½	*Chemistry.* Organic.	*Chemistry.* Organic.	*Chemistry.* Organic.	*Field Botany.*	*Field Botany.*

BACHELOR OF ARTS COURSE. WEEKLY SCHEDULE. THIRD YEAR

TERM	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL AND WINTER.	8½ 8½ 10½ 11½ 3	*Psychology and Logic.* *Zoology.* *Latin;* Tacitus, or *German.* Gram. & Reader.	*Geology.* Dyn & Hist. *English Literature.** *Latin;* Tacitus, or *German;* Gram. & Reader. *Anglo Saxon* *	*Psychology and Logic.* *Zoology.* *German;* Gram & Reader	*Geology:* Dyn. and Hist. *English Literature.** *Greek:* Demos. & Sloph., or *German*: Gram. & Reader *Anglo Saxon.**	*Psychology and Logic.* *Zoology.* *Greek:* Demos & Soph., or *German*: Gram. & Reader
SPRING.	8½ 9½ 10½ 11½ 3	*Ethics.* *Phys and Hygiene.* *Latin;* Juvenal, or *German;* Gram. & Reader.	*Geology.* *Phys. and Hygiene.* *English Literature.** *Latin;* Juvenal, or *German;* Gram. & Reader. *Anglo Saxon.**	*Ethics* *Phys. and Hygiene* *German;* Gram. & Reader	*Geology.* *Phys and Hygiene.* *English Literature.** *Greek;* Thucydides, or *German;* Gram & Reader *Anglo Saxon* *	*Ethics.* *Phys and Hygiene.* *Greek;* Thucydides, or *German;* Gram. & Reader

*Students take either English Literature or Anglo Saxon; not both

FOURTH YEAR,

FALL, WINTER AND SPRING.	8½ 9½ 10½ 11½ 3	*German*: Selections. *French:* Gram. & Reader. *Human Anatomy* *Const. and Inter. Law.* ADVANCED PSYCHOLOGY. *Phys. Geography.*	*Polit. Econ.* (advanced.) *Ethics.* (advanced) *French*: Gram & Reader. *Human Anatomy.* *English Literature.* *Logic.* (advanced) *Astronomy.* *Anglo Saxon.* *Prac Physics.* *Microscopy.*	*German:* Selections. *French* Gram. & Reader. *Human Anatomy* *Const. and Int Law.* ADVANCED PSYCHOLOGY. *Phys. Geography.*	*Polit. Econ*, (advanced,) *Ethics*, (advanced) *French*, Gram & Reader. *Human Anatomy.* *English Literature.* *Logic.* (advanced) *Astronomy* *Anglo Saxon.* *Practical Physics* *Microscopy.*	*German*: Selections. *French*: Gram. & Reader. *Human Anatomy* ADVANCED PSYCHOLOGY.

Course for the Degree of Bachelor of Science.

This course differs from the Arts course mainly in the substitution of modern languages (French and German) for Latin and Greek, and the requirement of an additional year's study of Mathematics. The last year of this course is mainly elective. To enter this course the student must have completed the course of study in the preparatory department, or its equivalent, except Greek.

[NOTE.—The figure in parenthesis, *e. g.* (1), following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction," beginning on page 21, the description of that course will be found. Where a bracketed and italicised title follows the name of the study the description will be found under the bracketed title. The other figures indicate the number of exercises per week.

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
French	1.	French	5.	French	5.
[*Mod. Lang.* 1]		[*Mod. Lang.* 1]		[*Mod. Lang* 1.]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
Physics	3	Physics	3.	Physics	3.
[*Chem. and Phys.* 1]		[*Chem. & Phys.* 1]		[*Chem & Phys.* 1.]	
English (1)	3.	English (1)	3.	English (1)	3.

SECOND YEAR.

Fall Term.		*Winter Term*		*Spring Term.*	
French	3.	French	3.	French	3.
[*Mod Lang* 2]		[*Mod. Lang.* 2]		[*Mod. Lang.* 2]	
Mathematics (2)	3.	Mathematics (2)	3.	Mathematics (2)	3.
History	2.	History	2.	History	2.
English (2)	2	English (2)	2.	English (2)	2.
Chemistry	3.	Chemistry	3.	Chemistry	3.
[*Chem. & Phys.* 3]		[*Chem. & Phys.* 3]		[*Chem. & Phys* 3]	
Polit. Science (1)	2.	Botany	2.	Botany	2.
		[*Biology* 1.]		[*Biology* 1.]	

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics	3.
[*Metaphysics* 1]		[*Metaphysics* 1]		[*Metaphysics* 1]	
Geology (1)	2	Geology (1)		Geology (1)	2.
Structural Bot.	5.	Structural Bot.	5.	Phys. & Hyg.	5.
Zoology		Zoology		[*Biology* 4]	
[*Biology* 2, 3]		[*Biology* 2, 3]			
German	5.	German	5.	German	5.
[*Mod Lang.* 3]		[*Mod. Lang.* 3]		[*Mod. Lang.* 3]	

Four original performances

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
German	3.	German	3.	German	3.
[*Mod. Lang.* 4]		[*Mod. Lang.* 4]		[*Mod. Lang.* 4]	
Metaphysics (3) *or*		Metaphysics (3) *or*		Metaphysics (3) *or*	
Mathematics (4)	2.	Mathematics (4)	2.	Mathematics (4)	2.

Three original performances during the year.

Electives.—Each student in this course is required to select from the following list ten exercises per week, throughout the year.

English (3)	2	Political Science (2)	2
English (4)	2	Political Science (4)	2
Chem. and Phys. (2)	2	Metaphysics (4)	2
Chem and Phys. (4)	5	Geology (5)	2
Biology (6)	6	Geology (6)	2
Biology (5)	5		

BACHELOR OF SCIENCE COURSE. WEEKLY SCHEDULE. FIRST YEAR.

TERMS.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½ 9½ 10½ 11½	*Physics:* Mechanics. *French:* Gram & Reader. *Mathematics:* Algebra.	*French:* Gram. & Reader. *Mathematics:* Algebra. *English Lang.*	*Physics:* Mechanics. *French:* Gram. & Reader. *Mathematics:* Geometry.	*French:* Gram. & Reader. *Mathematics:* Geometry. *Eng. Lang.*	*Physics:* Mechanics. *French:* Gram. & Reader. *Eng Lang.*
WINTER.	8½ 9½ 10¼	*Physics:* Electricity, Magnetism, Sound. *French:* Gram. & Reader. *Mathematics:* Trigonometry.	*French:* Gram. & Reader. *Mathematics:* Trigonometry. *Eng Lang. & Lit.*	*Physics:* Electricity, Magnetism, Sound. *French:* Gram. & Reader. *Mathematics:* Trigonometry,	*French:* Gram. & Reader *Mathematics:* Trigonometry. *English Lang. & Lit.*	*Physics:* Electricity, Magnetism, Sound *French:* Gram. & Reader. *English Lang. & Lit.*
SPRING.	8½ 9½ 10½	*Physics:* Heat, Light. *French:* Gram. & Reader. *Mathematics:* Analytical Geom.	*French:* Gram & Reader. *Mathematics:* Analytical Geom. *English Literature*	*Physics:* Heat, Light. *French:* Gram & Reader. *Mathematics:* Analytical Geom.	*French:* Gram. & Reader *Mathematics:* Analytical Geom. *English Literature.*	*Physics:* Heat, Light. *French:* Gram & Reader. *English Literature*

SECOND YEAR.

FALL.	8½ 9½ 10½ 11½	*Mathematics:* Calculus. *Rhetoric:* Essays. *Chemistry:* Inorganic.	*History.* *French:* Selections. *Chemistry:* Inorganic.	*Mathematics:* Calculus. *French:* Selections. *Chemistry:* Inorganic.	*History.* *French:* Selections. *Polit. Economy.*	*Mathematics:* Calculus *Rhetoric:* Essays. *Polit. Economy.*
WINTER.	8½ 9½ 10½ 11½	*Mathematics:* Calculus. *Rhetoric:* Essays. *Chemistry:* Inorganic.	*History.* *French:* Selections. *Chemistry:* Inorganic.	*Mathematics:* Calculus. *French:* Selections *Chemistry:* Inorganic.	*History.* *French.* Selections. *Field Botany.*	*Mathematics:* Calculus. *Rhetoric:* Essays. *Field Botany.*
SPRING.	8½ 9½ 10½ 11½	*Mathematics:* Calculus. *Rhetoric:* Essays. *Chemistry:* Organic.	*History.* *French:* Selections. *Chemistry:* Organic.	*Mathematics:* Calculus. *French:* Selections. *Chemistry:* Organic.	*History.* *French:* Selections. *Field Botany.*	*Mathematics:* Calculus. *Rhetoric:* Essays. *Field Botany.*

BACHELOR OF SCIENCE COURSE. WEEKLY SCHEDULE THIRD YEAR.

TERMS.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL AND WINTER.	8½	*Psychology and Logic*	*Geology*; Dynam & His	*Psychology and Logic.*	*Geology*: Dynam. & His.	*Psychology and Logic*
	9½	*Zoology.*	*Structural Botany.*	*Zoology.*	*Structural Botany.*	*Zoology.*
	11½	*German*, Gram & Read.	*German*: Gram & Read.	*German*. Gram. & Read.	*German*: Gram. & Read.	*German*: Gram. & Read
SPRING.	8½	*Ethics.*	*Geology*	*Ethics.*	*Geology.*	*Ethics.*
	9½	*Phys. and Hygiene.*	*Phys. and Hygiene.*	*Phys. and Hygiene.*	*Phys. and Hygiene.*	*Phys and Hygiene*
	11½	*German*. Gram. & Read.	*German*: Gram. & Read.	*German*; Gram. & Read.	*German*: Gram. & Read.	*German*: Gram. & Read.

FOURTH YEAR.

FALL AND WINTER.	8½	*German*: Selections.	*Polit. Econ.* (advanced) *Ethics.* (advanced)	*German*: Selections.	*Polit. Econ.* (advanced.) *Ethics*, (advanced.)	*German*: Selections.
	9½	*Analytical Chemistry.*	*Analytical Chemistry.*	*Analytical Chemistry.*	*Analytical Chemistry.*	*Analytical Chemistry.*
	10½	*Human Anatomy.* *Inter. & Const. Law.*	*Human Anatomy* *English Literature.*	*Human Anatomy.* *Inter. & Const. Law.*	*Human Anatomy.* *English Literature.*	*Human Anatomy.*
	11½	*Econ. Geol. Min. & Lith* *Advanced Psychology.*	*Logic* (advanced.) *Astronomy.*	*Econ., Geol., Min & Lit* *Advanced Psychology.*	*Logic*, (advanced.) *Astronomy.*	*Advanced Psychology.*
SPRING.	3	*Phys. Geography.*	*Anglo Saxon.* *Practical Physics* *Microscopy.*	*Phys. Geography.*	*Anglo Saxon.* *Practical Physics* *Microscopy.*	

Course of Study for the Degree of Bachelor of Science in Civil Engineering.

The department of Civil and Mining Engineering was established by the Board of Regents of the University in 1888, and a course of study leading to the degree of Bachelor of Science in Civil Engineering was organized which went into operation the fall of that year. By the accumulation of a large amount of fine instruments and other apparatus, and an increase in the number of instructors, the course of study has been largely expanded and improved; and it is now believed to compare favorably with the course of engineering as taught in the leading technical schools of the country. It is not only a comprehensive course, giving a young man fine opportunities for acquiring a broad and liberal education in the mathematical, physical and natural sciences, but it is a practical course, and prepares a young man thoroughly for the duties of the profession. The course of study extends over a period of four years, and any person of good preparation and studious habits can easily complete the course in that time.

The degree conferred on students who satisfactorily complete the course is that of Bachelor of Science in Civil Engineering. No student can be entered as a candidate for a degree after the beginning of the fourth year, though deserving young men, who have neither the time nor the funds to complete the full course, will be allowed to take a partial course, provided that a program of the intended course has been submitted to, and confirmed by the faculty.

The term Civil Engineering is understood to include the various branches of Engineering, designated by the special names of Railroad, Bridge, Hydraulic and Mining Engineering. It may be suggested that Civil Engineers find employment in the line of the professors in the following specialties of Engineering practice:

The surveys location and construction of railways, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder, suspension, and truss bridges, of towers roofs, and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors; coast and geodetic surveys; the determination of lattitude and longitude and the location of true meridians; the projection of maps; the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the selection and tests of the materials of engineering; the design and construction of metallurgical works; the surveys and construction of water works, imigration canals, levees, revetment and retaining walls.

In addition to the usual class room work, consisting of lectures,

recitations and practical exercises in free hand, geometrical, topographical and mechanical drawing and laboratory practice, excursions are made to points in neighboring states in connection with the courses in geology and metallurgy. Special tests of the tensile, compressive, transverse and torsional strength of iron, steel, aluminium, cements and mortars made by the members of each class.

Thesis.

Each candidate for a degree is required to prepare a thesis on some subject related to a branch of engineering or other department of science. The thesis must be either a design or review of some machine, or structure, or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. The thesis, with its accompanying drawings, must be deposited in the library of the University for permanent preservation.

Apparatus, Instruments and Models.

The collection of apparatus and instruments for instruction in engineering is complete and modern, consisting of transits, engineer's levels, theodolites, surveyor's compass, aneroid barometers, plane table, solar compass, Fairbanks cement testing machine, sextant, clinometers, odometers, pedometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, a blue printing outfit, a complete set of U. S weights and measures, and a very large collection of wood and plaster of paris models of the various orders of architecture, statuary, &c. This department is also supplied with a large Riehle Bros. testing machine of forty thousand pounds capacity.

Admission to the Course.

All candidates for admission to full standing in the first year must have satisfactorily completed the preparatory course of the University, or its equivalent, excepting Latin and Greek.

[NOTE.—The figures in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction" begin-on page 15, the description of that course will be found. Where a bracketed and italicised title follows the name of a study the description will be found under the bracketed title. The other figures indicate the number of exercises per week.]

FIRST YEAR.

Fall Term.		*Winter Term*		*Spring Term.*	
Physics (1)	3.	Physics (1)	3.	Physics (1)	3.
French	5.	French	5.	French	5.
[*Modern Lang.* 1)		[*Mod. Lang.* 1]		[*Mod. Lang.* 1]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
English (1)	3.	English (1)	3.	English (1)	3.
Freehand Drawg	2.	Freehand Draw'g.	2.	Freehand Draw.	2.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Analytic Geometry.	3.	Calculus.	3.	Calculus.	3
[*Mathematics* 2.]		[*Mathematics* 2.]		[*Mathemat* 2.]	
Geology (2)	2.	Geology (2)	2.	Geology (2)	2.
French	3.	French	3.	French	2.
[*Modern Lang.* 2]		[*Mod. Lang.* 2]		[*Mod Lang.* 2]	
Chemistry	3.	Chemistry	3.	Chemistry	3
[*Chem. and Phys.* 3]		[*Chem. and Phys.* 3]		[*Chem. Phys* 3]	
Surveying	4.	Des. Geometry	4.	Trig. Mine Surv.	4
[*Civ. Engineering* 1]		[*Civ. Eng.* 17]		[*Civ. Eng.* 2.]	
Field Practice.	1.	Drawing	4.	Field Prac.	1.
		[*Civ. Engineering* 21.]			

THIRD YEAR:

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics	3.
[*Metaphysics* 1]		[*Metaphysics* 1.]		[*Metaphysics* 1]	
An Chemistry	5.	An. Chemistry	5	An. Chemistry	5.
[*Chem. and Phys.* 4]		[*Chem and Phys-* 4]		[*Chem and Phys.* 4.]	
Astronomy	2.	Astronomy	2.	Astronomy	2.
[*Mathematics* 3.]		[*Mathematics* 3.]		[*Mathematics* 3.]	
Rational Mechan.	4.	Rational Mechan.	4	Applied Mechan.	4
[*Civil Eng.* 3]		[*Civil Eng.* 4.]		[*Civil Eng.* 5]	
Mechan Drawing	2.	Mineralogy	2.	Architecture	3.
[*Civil Eng* 22.]		[*Geology* 3.]		[*Civil Eng.* 16.]	
Field Practice	1.	Mech. Drawing	2.	Mech. Drawing	2
[*Civil Eng.* 12.]		[*Civil Eng.* 22.]		[*Civil Eng* 22.]	
				Field Practice	1.
				(*Civil Eng.* 19.]	

Four original performances during this year.

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Roofs and Bridges [*Civil Eng.* 6.]	4.	Metallurgy [*Civil Eng.* 9.]	3.	Railroads [*Civil Eng.* 15]	3.
Stereotomy [*Civil Eng.* 18.]	2.	Hydraulics [*Civil Eng* 7.]	4.	Phys. and Hyg. [*Biology* 4.]	5.
Railroads [*Civil Eng.* 11.]	4.	Steam Engine [*Mech. Eng.* 6]	4.	Specifications. Thesis & Thesis Draw.	
Mining [*Civil Eng.* 13.	3.	Materials of Eng. [*Civil Eng.* 14.]	3.	Field Practice [*Civil Eng* 19.]	4.
Field Practice [*Civil Eng.* 12.]	4,	Geology [*Civil Eng.* 8.]	2.		

Three original performances during the year including *Thesis.*

CIVIL ENGINEERING COURSE—WEEKLY SCHEDULE—FIRST YEAR

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL	8½ 9½ 10½ 11½ P. M	Physics. French. Algebra and Geometry. Drawing, 2 hrs.	French. Algebra & Geometry. English Language.	Physics. French. Algebra and Geometry. Drawing, 2 hrs.	French. Algebra and Geometry. English Language.	Physics. French English Language.
WINTER	8½ 9½ 10½ 11½ P. M.	Physics. French. Trigonometry. Drawing, 2 hrs.	French. Trigonometry. English Language & Lit.	Physics. French. Trigonometry. Drawing, 2 hrs.	French. Trigonometry. English Language & Lit.	Physics. French. English Language & Lit.
SPRING.	8½ 9½ 10½ 11½ P. M.	Physics. French. Analytical Geometry. Drawing, 2 hrs.	French. Analytical Geometry. English Literature.	Physics. French. Analytical Geometry. Drawing, 2 hrs.	French. Analytical Geometry. English Literature.	Physics. French. English Literature.

SECOND YEAR

FALL.	8½ 9½ 10½ 11½ P. M.	Calculus. Surveying. Chemistry.	Geology. Surveying. French.	Calculus. Surveying. French Chemistry.	Geology. Surveying. French.	Calculus. Chemistry. Field Practice, 4 hours.
WINTER.	8½ 9½ 10½ 11½ P. M.	Calculus. Des. Geometry. Geology Chemistry.	Des. Geometry. French. Chemistry.	Calculus. Des. Geometry. French. Chemistry.	Des. Geometry. French.	Calculus. Geology. Drawing, 4 hours.
SPRING.	8½ 9½ 10½ 11½ P. M.	Calculus Trig. and Mine Surveying Geology. Chemistry.	Trig. and Mine Surveying. French. Chemistry.	Calculus. Trig and Mine Surveying. French. Chemistry.	Trig. and Mine Surveying French.	Calculus. Geology. Field Practice, 4 hours

CIVIL ENGINEERING COURSE—CONTINUED—WEEKLY SCHEDULE—THIRD YEAR.

TERM.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL	8½	Psychology.		Psychology.		Psychology.
	9½		Analyt. Chem.	Analytical Chemistry.	Analytical Chemistry.	Analytical Chemistry.
	10½	Analyt. Chem	Rational Mechanics.	Rational Mechanics.	Rational Mechanics.	Rational Mechanics.
	11½		Astronomy.		Astronomy.	
	P. M.	Mech. Drawing 1½ hrs.		Mech. Drawing, 1½ hrs.		Field Practice, 4 hours.
WINTER.	8½	Logic.		Logic.		Logic.
	9½	Analyt. Chemistry.	Analyt. Chemistry	Analytical Chemistry.	Analytical Chemistry.	Analytical Chemistry.
	10½		Rational Mechanics.	Rational Mechanics.	Rational Mechanics.	Rational Mechanics.
	11½	Mineralogy.	Astronomy.	Mineralogy.	Astronomy.	
	P. M.					Mech. Drawing, 3 hours.
SPRING.	8½	Ethics.		Ethics.		Ethics.
	9½	Analyt. Chemistry.	Analytical Chemistry.	Analytical Chemisrry.	Analytical Chemistry.	Analytical Chemistry.
	10½	Mechanics.	Mechanics.	Mechanics	Mechanics.	
	11½	Architecture.	Astronomy.	Architecture.	Astronomy.	Architecture.
	P. M.	Mech. Drawing, 2 hours.		Mech. Drawing, 2 hours.		

FOURTH YEAR.

FALL.	8½	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	
	9½		Stereotomy.		Stereotomy.	
	10½	Railroads.	Railroads.	Railroads.	Railroads.	
	11½	Mining		Mining.		Mining.
	P. M.					Field Practice, 4 hours.
WINTER.	8½	Metallurgy.	Geodesy.	Metallurgy.	Geodesy	Metallurgy.
	9½	Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics.	
	10½	Steam Engine.	Steam Engine.	Steam Engine.	Steam Engine.	
	11½	Materials of Engineering.		Materials of Engineering.		Materials of Engineering.
	P. M.					
SPRING.	8½	Railroads.		Railroads.		Railroads.
	9½	Phys. and Hygiene.	Phys. and Hygiene.	Phys. and Hygiene.	Phys. and Hygiene.	Phys. and Hygiene.
	10½					
	11½		Specifications.			
	P. M	Thesis & Thesis Drawings.				

Course of Study for the Degree of Bachelor of Science in Mechanical Engineering.

The Department of Mechanical Engineering and the Mechanic Arts was established by the Board of Regents at its meeting in 1891 The State Legislature made an appropriation the same year providing for the erection of a suitable building for instruction in the Mechanic Arts, and in 1893 made an additional appropriation for a Mechanical Engineering Laboratory.

The Course in Mechanical Engineering extends through four years and comprises academic instruction in English Language and Literature, French and German, Psychology, Logic, Ethics, Mathematics, including the Differential and Integral Calculus, Geology, Physics and Chemistry with laboratory work, Physiology and Hygiene; the following technical instruction in common with the students of Civil engineering; Land Surveying and Field Practice, Instrumental and Mechanical Drawing and Descriptive Geometry, Analytic and applied Mechanics, Hydraulics, Materials of Engineering, Railroad Economy, Specifications and Contracts; and the four-years' Course in Mechanics Arts with the entire Course in Mechanical Engineering and laboratory work as detailed elsewhere.

The object of this course is to enable young men who have pursued successfully the above prescribed studies to enter upon the proper development of their professional work with intelligence and well directed application. Whatever special branch of mechanical engineering they may enter as their chosen or prescribed field is not in any measure directly prepared for in the above course It is rather the purpose to give thorough technical and practical training combined with academic courses containing the elements of a liberal education, as the best preparation for their future work, and as the proper foundation upon which they may build successfully their professional practice and reputation.

The technical instruction is supplemented throughout by experimental investigations and practical work in the shops and mechanical laboratory, visits of inspection, tests of power plants and the preparation of a graduating thesis. In general, the course in Mechanical Engineering has been arranged to develop the principles and to prepare for intelligent work involving the design, cost, construction, installation, testing and management of power generators, prime movers, power plants, and machinery for manufacturing, transportation and power transmission; and the planning cost, construction and management of manufacturing plants, shops and factories, with their systems of fire protection, and lighting, heating and ventilating plants.

Admission.

Candidates for admission to the Course in Mechanical Engineering are required to pass a satisfactory examination in English Grammar, Arithmetic, Plane Geometry, Algebra (through undetermined co-efficients) Geography, United States History, and Freehand drawing. In general, candidates must have satisfactorily completed the Preparatory course of the University, or its equivalent, excepting Latin and Greek, and have had, in addition thereto the course in Free Hand Drawing, or its equivalent. The studies of the University should not be anticipated, but a thorough and working knowledge of the elements acquired, so that academic and technical studies may be pursued to better advantage later on.

Graduating Thesis.

Each candidate for a degree is required to prepare a satisfactory thesis upon a subject immediately related to the studies of his course. It may be of the nature of a design for a machine or plant, of a test of machinery, plant or appliances or an investigation in some line of mechanical engineering work.

The degree of Bachelor of Science in Mechanical Engineering will be given to those who successfully pass the prescribed course of studies and practical work and present a satisfactory thesis.

[NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction" beginning on page 15, the description of that course will be found. Where a bracketed and italicised title follows the name of a study the description will be found under the bracketed title. The other figures indicate the number of exercises per week.]

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Physics	3.	Physics	3.	Physics	3.
[*Chem. and Phys.* 1]		[*Chem. & Phys* 1.]		[*Chem. & Phys.* 1.]	
French	5.	French	5.	French	5.
[*Mod. Lang.* 1.]		[*Modern Lang.* 1.]		[*Modern Lang.* 1.]	
Algebra & Geom.	4	Trigonometry	4	Analytic & Geom.	4.
[*Mathematics* 1.]		[*Mathematics* 1.]		[*Mathematics* 1.]	
English Lang.	3.	English Lang.	3.	English Lang.	3.
[*English* 1]		[*English* 1.]		[*English* 1.]	
Shop Work	3	Shop Work	3	Shop Work	3.
[*Mechanic Arts* 1.]		[*Mechanic Arts* 1.]		[*Mechanic Arts* 2.]	

Freehand Drawing, two exercises per week, for those who have not taken it as preparatory work.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Anal. Geom., Cal.	3.	Differential Cal.	3.	Integral Calculus	3.
[*Mathematics* 2.]		[*Mathematics* 2.]		[*Mathematics* 2.]	
Geology	2.	Geology (2)	2.	Geology (2)	2.
Land Surv.	4.	Descriptive Geom	4.	Mechanism	4.
[*Civil Eng.* 1.]		[*Civ Eng.* 5.]		Machine Sketch.	1.
Chemistry	3.	Chemistry	3.	[*Mech. Engin.* 1.]	
[*Chem. & Phys.* 3.]		[*Chem. & Phys.* 2.]		Chemistry	3
Physical Lab.	2.	Physical Lab,	2.	[*Chem. & Phys.* 3.]	
[*Chem & Phys.* 2.]		[*Chem. & Phys.* 2.]		Physical Lab.	2.
Field Practice	1.	Instrum Drw'g	1.	[*Chem. & Phys.* 2.]	
[*Civil Eng.* 10.]		]*Civil Eng.* 21.]		Mechanical Drw'g	1
Shop Work	2.	Shop Work	2.	[*Civil Eng.* 21.]	
[*Mechanic Arts* 3.]		[*Mechanic Arts* 3.]		Shop Work	2.
				[*Mechanic Arts.* 4.]	

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Psychology	3.	Logic	3.	Ethics	3.
[*Met.* 1.]		[*Met* 1.]		[*Met.* 1.]	
*Analyt. Chem.	5.	*Analyt. Chem.	5.	*Analyt. Chem.	5.
[*Chem. & Phys.* 4.]		[*Chem. & Phys.* 4.]		[*Chem. & Phys.* 4.]	
Analyt. Mech.	4.	Analytic Mech.	4.	Applied Mech.	4.
[*Civil Eng.* 3.]		[*Civil Eng.* 4.]		[*Civil Engin* 5.]	
Workshop Appl.	1.	Workshop Appl.	1.	Workshop Appl.	1.
[*Mech. Eng.* 2.]		[*Mech. Eng.* 2.]		[*Mech. Engin.* 2.]	
German	5.	German	5.	German	5.
[*Modern Lang.* 3.]		[*Modern Lang.* 3.]		[*Mod. Lang.* 3.]	
Mechanical Draw.	2.	Mechan. Draw.	2.	Mechanical Draw.	2.
[*Civil Eng* 22.]		[*Civil Eng.* 22.]		[*Civil Eng.* 22.]	
Mechanical Lab.	1.	Mechanical Lab.	1.	Mechanical Lab.	1.
[*Mech Eng.* 11.]		[*Mech. Eng.* 11.]		[*Mech. Eng.* 11.]	
Shopwork	3.	Shopwork	3.	Shopwork	3
[*Mech. Arts* 6, 7.]		[*Mech Arts* 6, 7.]		[*Mech. Arts* 6, 7.]	

*The five one-hour exercises per week in Analytical chemistry are counted as equivalent to two class-room exercises per week.

FOURTH YEAR.

Fall Term.	*Winter Term*	*Spring Term.*
Designing Mach. 3.	Designing Mach. 3.	Designing Machinery and thesis 3.
[*Mech. Eng* 10.]	[*Mech. Eng.* 10.]	[*Mech Engin.* 10.]
Journal Meeting 1.	Journal Meeting 1.	Journal Meeting 1.
Mech. Eng. 9.]	[*Mech. Eng.* 9.]	[*Mech. Engin* 9.]
Thermodynamics 3.	Steam Engin 4	Phys. & Hyg. 5.
[*Mech. Eng.* 5.]	[*Mech. Eng.* 6.]	[*Biology* 4.]
Mach.& Mill W'k. 3.	Hydraulics 4.	Railroad Econ. 3
[*Mech Eng* 3]	*Civil Engin* 7.]	[*Civil Eng.* 15.]
Power 2.	Hydraulic Mach. 1.	Workshop Econ. 3.
[*Mech. Eng.* 4.]	[*Mech. Eng* 7.]	[*Mech Eng.* 8.]
Mechanical Lab 2.	Materials of Eng. 3	Specifications 1.
[*Mech. Eng* 11.]	[*Civil Eng.* 14.]	Law of contr'cts 1.
Machine Const. 2.	Mechanical Lab. 2.	Mechanical Lab. 3
[*Mechanic. Arts* 8.]	[*Mech Eng.* 11.]	[*Mech. Eng* 11.]
	Machine Const. 2.	Machine const. 2.
	[*Mechan. Arts* 8.]	[*Mechanic Arts* 3.]

Four original performances in the third year and three in the fourth are required.

During the third and fourth years the laboratory and shopwork increase the apparent number of hours per week. Three hours in these branches are construed to be equivalent to one classroom exercise.

MECHANICAL ENGINEERING COURSE. WEEKLY SCHEDULE.

TERM.	HOUR.	FIRST YEAR.	SECOND YEAR	THIRD YEAR.	FOURTH YEAR.
FALL.	8:30	Physics, M. W. Fr.	Calculus, M. W Fr, Geology, T. Th.	Psychology, M. W. Fr.	Designing Machinery, T. Th.
	9:30	French. M. T. W. Th. Fr.	Land Surveying, M T. W. Th.	Anal. Chemistry, M. T. W Th. Fr	Journal Meeting, Fr.
	10:30	Alge . & Geom. M. T. W. Th.		Anal Mechanics, M T. W. Th. Workshop Appliances. Fr.	Thermodynamics, M. T. W. Th.
	11:30	English Lang. T. Th. Fr.	Chemistry, M. T. W.	German, M. T. W. Th.	Machinery and Millwork, M. W. F. Power, T. Th.
	P. M. 1:30 to 4:30	(Freehand Draw. T. Th. Mechanic Arts, M. W. Fr.	Physical Laboratory, M. W. Mechanic Arts, T. Th. Field Practice, Fr.	Mechanical Drawing, M. W. Mechanical Laboratory, Fr. Mechanic Arts, T. Th , and Sat. 8:30 to 11:00 A. M.	Designing Machinery; T. Machine Construction, M. Fr. Mechanical Laboratory, Th., and Sat. 8:30 11:30 A. M.
WINTER.	8:30	Physics, M. W. Fr.	Calculus, M. W. Fr.	Logic, M. W. Fr.	Designing Machinery, T. Th,
	9:30	French, M. T. W. Th. Fr.	Descriptive Geom, M. T. W. Th.	Anal. Chemistry, M. T W. Th. Fr.	Hydraulics, M, T. W. Th. Hydraulic Machinery, Fr.
	10:30	Trigonometry, M. T. W. Th.	Geology, M. F.	Anal. Mechanics. M. T. W. Th. Workshop Appliances, Fr.	Steam Engineering. M. T. W. Th
	11:30	English Lang. T. Th. Fri.	Chemistry, M. T. W.	German, M. T. W. Th. Fr.	Materials of Engineering, M. T. W. Journal meeting, Fr.
	P. M. 1:30 to 4:30	(Freehand Draw. T. Th. Mechanic Arts, M. W. Fr.	Physical Laboratory, M. W. Mechanic Arts, T. Th. Instrumental Drawing, Fr.	Mechanical Drawing. M. W. Mechanical Laboratory, Fr. Mechanic Arts, T, Th.,and Sat. 8:30 to 11:30 A. M.	Designing Machinery, T. Machine Construction, M F. Mechanical Laboratory, Th., and Sat. 8:30-11:30 A. M.
SPRING.	8:30	Physics, M. W. Fr.	Calculus, M. W. Fr.	Ethics. M. W. Fr.	Specifications, one hour weekly.
	9:30	French, M. T. W. Th. Fr.	Elem. of Mech. M. T. W. Th. Machine Sketching, Fr.	Anal. Chemistry, M. T. W. Th.	Phys. and Hygiene, M T. W. Th. Fr.
	10:30	Analytic Geom. M T. W. Th.	Geology, M. Fr.	Applied Mechanics, M. T. W. Th Workshop Appliances, Fr.	Railroad Economy, M. W. Fr. Thesis Designing, T. Th
	11:30	English Lang, T. Th. Fr.	Chemistry, M. T. W.	German, M. T. W. Th Fr.	Workshop Economy, M. W. Fr. Law of Contracts, one hour weekly. Journal Meeting, Fr.
	P. M. 1:30 to 3:30	(Freehand Draw. T. Th. Mechanic Arts, M. W. Fr.	Physical Laboratory, M. W. Mechanic Arts, T. Th. Mechanical Drawing, Fr.	Mechanical Drawing, M. W. Mechanical Laboratory, Fr. Mechanic Arts, T. Th , and Sat, 8:30 11:30 A. M.	Thesis Designing, T. Machine Construction. M. Fr. Mechanical Laboratory, Th., and Sat. 8:30-11:30 A. M.

Course in the Mechanic Arts.

The building provided for this course of instruction is about ninety by thirty-two feet, two stories in part, giving three large large rooms or shop spaces for work in wood and metal and for constructive purposes. It is situated on the lower part of the campus near the river, being just above the railroad and accessible by the new University road. It is supplied with water and natural gas, each at a pressure of about one hundred and twenty-five pounds per square inch, giving ample power for driving the machinery or for experimental work.

The Course in Mechanic Arts, extending through three years, comprises wood-working. carpentry, joinery and bench work, wood-turning and pattern-making; moulding and casting; forging in iron and steel; tin-smithing and sheet-iron work; pipe-fitting and boiler work; machine shop practice, iron and brass work at the bench, hand-work with machine tools, and constructive work on machine tools, and a course of instruction in attendance on motive power and workshop appliances and machinery.

The object of this course is to present the simple elements of some of the constructive arts, which admit of being developed into a logical series of exercises, for their educational value rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the student is acquainted with the proper use of the fundamental tools and with the accuracy called for in the production of the elements of constructiou and of simple combinations of the same in fitting parts of work together. It combines sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and is therefore required of all students taking the full course in Mechanical Engineering. In the fourth year, arranged entirely for students in Mechanical Engineering, machine construction is taken up in detail and practice given in the building, assembling and erecting of workshop and engineering appliances, motive power, machinery and accessories.

Facilities for Instruction.

The material equipment of the department includes such apparatus, tools and machinery, and supplies of stock and material as will en-

able the work of instruction and of construction to be carried on efficiently. The benches in the wood-working room are each equipped with a complete set of tools, and, as in the other branches, special tools and appliances are provided for occasional or class use. The wood-working machinery consists of wood-turning and pattern-makers' lathes, power planer, jointer, jig-saw, band-saw and circular-saw. Each student has a compartment at the moulding bench, with flasks, moulding-boards and moulder's tools and material; at present lead castings only are made, iron castings being made at a local foundry. The forges for working iron and steel are each equipped with a set of the essential tools and tongs, while extra and special sets of forge tools and appliances are placed for the use of two students in common. The forges have power blast and exhaust; and blacksmiths' drills, swage block, punching and shearing machine, power hack-saw, bolt-header are provided for more advanced work of construction. Gas forges are also used to familiarize the student with gas forging and tempering. In tin-smithing and sheet-iron work each student has a complete outfit with a gas furnace, and special tools in common Stocks and dies and pipe-fitters' vises with ratchet drills and accessories form the equipment for this class of work. In all of the machine shop practice the students have a well-stocked tool room to draw upon, besides their individual sets of small tools for work at the bench or with machine tools. The latter comprise, at present, a sixteen-inch screw-cutting engine lathe, with all the latest improvements for tool-room and other special work, a twenty-four-inch drill press, a sixteen-inch "double triple quick stroke" sharper, three eleven-inch screw-cutting lathes, specially fitted also for hand-turning in iron or brass, a speed lathe with complete equipment for hand-turning, drilling and polishing, a two-wheel bench emery grinder, a twist drill grinder, and a two-wheel emery tool grinder.

Admission.

The three-year course in the Mechanic Arts is open to all students of the University. A partial course is provided for the one-year students in Agriculture, consisting of three exercises per week throughout the Fall and Winter terms in carpentry, joinery, bench work and wood-turning, and of two exercises per week, during the same terms, in iron and steel forging.

Weekly Schedule, Mechanic Arts Course for Mechanical Engineering Students.

Term.	Year.	MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY	FRIDAY.	SATURDAY
Fall	I.	Carpentry. Joinery.		Carpentry. Joinery.		Turning.	
	II.		Forging. Iron work at bench.		Forging. Iron work at Bench.		Hand work. Machine tools.
	III.						
	IV.	Machine construction.				Machine construction.	
Winter.	I	Carpentry, Joinery.		Carpentry. Joinery.		Turning.	
	II		Forging. Iron work at bench.		Forging. Iron work at bench.		Hand work. Machine tools
	III.						
	IV.	Machine construction.				Machine construction.	
Spring.	I.	Pattern making.		Moulding, Casting		Pattern-making.	
	II		Tin-smithing. Machine tools		Pipe fitting. Machine tools.		Machine tools.
	III						
	IV.	Machine construction.				Machine construction.	

The exercises are of three hours duration—1:30 to 4:30 P. M., and on Saturday, 8:30 to 11:30 A. M.

Weekly Schedule for a Three-Year Course in the Mechanic Arts.

Term.	Year.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
Fall.	I.		Carpentry, Joinery.	Turning.	Carpentry, Joinery.	
	II.	Forging. Iron work at bench.				Forging. Handwork machine tools.
	III			Iron work at bench.		
Winter	I.		Carpentry, Joinery.	Turning.	Carpentry, Joinery.	
	II.	Forging. Iron work at bench.				Forging. Handwork machine tools.
	III.			Iron work at bench.		
Spring.	I.		Pattern-making.	Moulding, Casting.	Pattern-making.	
	II.	Tin-smithing				Pipe-fitting.
	III.	Machine Tools.		Machine Tools.		Machine Tools.

The Exercises are of three hours duration—1:30 to 4:30 P. M.

The Course of Study for the Degree of Bachelor of Agriculture.

This coures is designed to give a thorough, liberal and practical education in Agriculture and similar sciences, in order to fit the student as fully as possible for the vocation of farming, and for the duties of citizenship The full course of study requisite for graduation covers a period of three years.

Requirements for Admission.

Candidates for admission to the course in Agriculture, must be able to pass a satisfactory examination in English Grammar, Arithmetic, Geography, United States History and Elementary Algebra.

Students who complete the full three years' course of study, receive the degree of Bachelor of Agriculture.

[NOTE.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under under that name in the "Courses of Instruction," beginning on page 21, the description of that course will be found. Where a bracketed aud italicised title follows the name of a study, the description will be found under the bracketed title. The other figures indicate the number of exercises per week.]

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Algebra & Geometry	4.	Algebra & Geometry	2.	Algebra & Geometry	2.
Book-Keeping	3.	Book-keeping	3.	Book-Keeping	3.
English	1.	English	1.	English	1.
Chemistry	3.	Chemistry	3.	Chemistry	3.
[*Chem. & Phys.* 3]		[*Chem. & Phys.* 3]		[*Chem. & Phys.* 3]	
Polit. Economy	2.	Botany	2.	Botany	2.
[*Pol. Science* 1]		[*Biology* 1.]		[*Biology* 1.]	
Agriculture (1)	2.	Agriculture (1)	2.	AgrIculture (1)	2.

[NOTE.—The above studies not followed by figures in parenthesis are part of the second year studies of the Preparatory Department, and will be found in that list on subsequent pages.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Physics	3.	Physics	3.	Physics	3.
[*Chem. & Phys.* 1.]		[*Chem. & Phys.* 1.]		[*Chem. & Phys.* 1.	
Zoology	3.	Zoology	3.	Anat., Phys & Hy.	5.
[*Biology* 3.]		[*Biology* 3.]		[*Biology* 3]	
Mathematics (1)	4.	Mathematics (1)	4.	Mathematics (1)	4.
English (1)	3.	English (1)	3.	English (1)	3.
Agriculture (2)	2.	Agriculture (2)	2.	Agriculture (2)	3.

THIRD TERM.

Fall Term.		*Winter Term.*		*Spring Merm.*	
Agriculture (4)	2.	Agriculture (3&4)	4.	Agriculture (3&4e	4.
Civil Engin'r'g (1)	4.	History	2.	History	2.
Psychology		Logic		Ethics	
[*Metaphys.* 1]	3.	[*Metaphys.* 1]	3.	[*Metaphys.* 1]	3.
Geology (1)	2.	Geology (1)	2.	Geology (1)	2.
English (3)	2.	English (3)	2.	English (3)	2.
Phys. Geography	2.	Phys. Geography	2.	Phys. Geography	2.
[*Geology* 5.]		[*Geology* 5.]		[*Geology* 5.]	

Two original performances during the 2nd year and three during the 3rd year are required of all candidates for the degree of B. Agr.

MANUAL TRAINING.

All students in the Agricultural courses will be required to take a course in manual training in the shops of the Mechanical Department, sufficient to receive a practical knowledge of working in wood and iron.

ONE YEAR COURSE IN AGRICULTURE.

The purely agricultural studies in the Agricultural Course are so arranged that students who wish to devote one year to the study of technicol agricultural subjects, may have the opportunity. In addition to a full course of lectures, the following class-room work will be required.

Fall Term.		*Winter Term.*		*Spring Term.*	
Ele. Agriculture	2.	Ele. Agriculture	2.	Ele. Agriculture	2.
Book-keeping	3-	Book-keeping	3.	Book-keeping	3.
Chemistry	3.	Chemistry	3.	Chemistry	3.
Political Econ.	2.	Botany	2.	Botany	2.
Domestic Animals	2.	Domestic Animals	2.	Domestic Animals	2.
Horticulture	2.	Horticulture	2.	Horticulture	2.
Agr. Science	2.	Agr. Science.	2.	Agr. Science	2.

This course leads to no degree, but students who complete it may receive a certificate indicating the completion of the above studies.

BACHELOR OF AGRICULTURE—WEEKLY SCHEDULE. FIRST YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½ 9½ 10½ 11½	Book-keeping. Geometry. Chemistry.	Algebra. Elementary Agriculture. Chemistry.	Book-keeping. Geometry. Chemistry.	Algebra Elementary Agriculture. Polit. Economy.	Book-keeping English Composition, Polit. Economy.
WINTER AND SPRING.	8½ 9½ 10½ 11½	Book keeping. Geometry. Chemistry.	Algebra. Elementary Agriculture. Chemistry.	Book-keeping. Geometry Chemistry.	Algebra. Elementary Agriculture. Botany.	Book-keeping. English Composition. Botany
			SECOND YEAR.			
FALL.	8½ 9½ 10½ 11½	Physics. Zoology. Algebra.	Domestic Animals. Geometry. English Language.	Physics. Zoology. Algebra.	Domestic Animals. Geometry. English Language.	Physics. Zoology. English Language.
WINTER,	8½ 9½ 10½ 11½	Physics. Zoology. Trigonometry.	Domestic Animals. Trigonometey. English Lang. & Lit.	Physics. Zoology. Trigonometry.	Domestic Animals. Trigonometry. English Lang. & Lit.	Physics. Zoology. English Lang & Lit.
SPRING.	8½ 9½ 10½ 11½	Physics. Anat., Phys. and Hy. Civil Government.	Domestic Animals. Anat., Phys. and Hy. English Literature.	Physics. Anat., Phys. and Hy. Civil Government.	Domestic Animals. Anat., Phys. and Hy. English Liturature.	Physics. Anat., Phys. and Hy. English Liturature.
			THIRD YEAR.			
FALL.	8½ 9½ 10½ 11½	Psychology. Surveying. Agricultural Science.	Geology. Surveying. English Literature. Phys. Geography.	Psychology. Surveying.	Geology. Surveying. English Literature. Phys. Geography.	Psychology. Agricultural Science.
WINTER.	8½ 9½ 10½ 11½	Logic. Agricultural Science.	Geology. Mod. History. English Literature. Phys. Geography.	Logic. Agricultural Science. Horticulture.	Geology. Mod. History. English Literature. Phys. Geography.	Logic. Horticulture
PRING.	8½ 9½ 10½ 11½	Ethics. Agricultural Science,	Geology. History. English Literature. Phys. Geography.	Ethics. Agricultural Science. Horticulture.	Geology. History. English Literature. Phys. Geography.	Ethics. Horticulture.

Post-Graduate Courses.

MASTER OF ARTS.

The degree of Master of Arts will hereafter be given to Bachelors of Arts, who shall have pursued one-year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

MASTER OF SCIENCE

The degree of Master of Science will hereafter be given to Bachelors of Science who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professor in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

Degrees Conferred June 8, 1892.

IN COURSE.

Bachelor of Arts: George M. Ford, John W. Francis, John M. Hackney, Hough Houston, Lin M. Jaco, Charles B. Sisler.

Bachelor of Science: George M. Alexander, John A. Grier.

Bachelor of Science in Civil Engineering: Carroll C. Coffman, Ezra C. Garlow, John T. Holbert, Edmund L. Zearley.

Bachelor of Laws: George M. Alexander, John A. Bell, Cary M. Bennett, John J. Carney, John S Cogar, John R. Darrah, Richard L. Fleming, C. B. Hall, J. W. Harman, H. W. Harmer, J. C. Herndon, W. Kauroku, I. R. Mattingly, T H. Morris, C. M. Murphy, A. S. Poling, M. D. Post, A. G. P. Price, E. M. Showalter.

HONORARY DEGREES.

Doctor of Laws: Rev. Stephen A. Hunter, M. D.

Doctor of Divinity: Rev. N. C Campbell; Rev. Wm. W. Royal

Doctor of Philosophy: Professor French Smith.

THE LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity

The degree of Bachelor of Laws is conferred upon graduates in this department. By an act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law; Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleading and Practice.

Common and Statute Law, &c

PROF. ST GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Notes on Common Law Pleading and Practice in West Virginia by Professor Brooke, Williams on Real Property, and for *reference* the Code of West Virginia, and subsequent Acts of the Legislature.

The text-books will be supplemented by lectures each day, and it will be the endeavor so to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes

The text-books used in Constitutional Law are the "Federalist" and Cooley's Constitutional Law. This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States, interpreting its provisions, are also the subject of lectures.

The text-book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, Barton, Addison, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence;

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the laws relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Length of the Course.

By resolution of the Board of Regents in June, 1892, the course in law was made a two years' course for the degree of Bachelor of Laws.

It is understood, however, that this does not prevent students who are able to do so, from taking the whole course in one year. The lectures are so arranged that students may attend both the Junior and Senior classes during the same year, thus enabling them, if prepared, to go over the whole course in one year.

As one term is not much dependent upon another, as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the begining of the Fall Term if possible.

Terms and Topics.

The work of the year is divided among the three terms as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings.	Prof. Brooke.
Contracts. Negotiable Instruments. Equity Pleading. Evidence.	Prof. Willey.

WINTER TERM

Constitutional Law. International Law. Blackstone, 1st and 2 books (continued). Blackstone, 3d and 4th books (begun)	Prof. Brooke.
Agency. Partnership. Surety and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	Prof. Willey.

SPRING TERM.

Constitutional Law (continued). Criminal Law, &c., Blackstone, 3d and 4th boooks (continued). Real Property.	Prof. Brooke.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	Prof. Willey.

The following are the Junior and Senior divisions of the course:

JUNIOR COURSE.	SENIOR COURSE.
Blackstone. Rights of Persons. Rights of Things. Torts. Criminal Law.	Common Law Pleading. Real Property. Negotiable Paper. Partnership. Suretyship and Guaranty.
Statute Law.	Evidence.
Constitutional Law.	Equity Pleading and Practice.
Contracts.	Bailments.
Agency.	Insurance.
Evidence.	Corporations.
	Practice in the Courts.

The methods of instruction consist of Lectures and Examinations, from approved text books read in course, the drawing of the various legal papers requisite in the ordinary practice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot Court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

REQUIREMENTS FOR ADMISSION AND DEGREES.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures, If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English branches will be held by the law Professors and the President of the University, of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies,

The examination will include the correct writing of ordinary English.

The qualifications of a student for receiving the degree of Bachelor of Laws is not measured by the time he has spent in completing the course, whether that be one year, or two years, or many years. But the sole test of his title to the degree is his ability successfully pass a rigid examination on the whole course, and thus demonstrate that he is worthy of it. The value of a diploma from this department will not be impaired by conferring it where it is not merited. Time, therefore, is not made a test in any case, except that a student must have been in attendance upon the lectures at least one scholastic year before he will be admitted to the examination for a degree. If he fails to reach the standard in his first examination, he may apply for another examination one year thereafter, whether he has continued in attendance at the University or not.

EXPENSES.

The tuition fee in the Law Department is $8.00 per term.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

The summary of the expenses of boarding, &c , given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text-books essential to the successful prosecution of the work of the law school are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence, Smith's Mercantile Law, Adams' Equity, The Fœderalist, Woolsey's International Law, Cooley's Principles of the Constitution.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second hand" at from $12.00 to $15.00 Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now

regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be over-estimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar, the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

WEEKLY SCHEDULE OF LAW LECTURES.

JUNIOR CLASS.

	Hrs.	Monday	Tuesday.	Wednesday.	Thursday.	Friday.
Prof. Brooke.	8½	Blackstone.	.....	Blackstone.	.....	.....
	9½	.....	.....	.....	.....	Blackstone.
	10½	Con. & Int. Law	.....	Con. & Int. Law.		
Prof. Willey.	10	.....	Com'l Law.	.....	Com'l Law.	.....
	11	Evidence.	....	Evidence.	.....	.....

SENIOR CLASS

	Hrs.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Prof. Brooke.	8½	.....	Pleading.	.....	Pleading.	.....	Pleading.
Prof Willey.	8½	.....	.....	.....	.....	Evidence.	
	9½	Equity.	.....	Equity.	.....	.....	
	10	.....	Com'l Law.	.....	Com'l Law.	.....	
	10½	.....	.....	.....	.....	Com'l Law.	

THE MILITARY DEPARTMENT.

Appointment of Cadets.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen. nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The Commandant of Cadets, or the President will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts--the names of the Regents are prefixed to this catalogue.

District I.	Hancock, Brooke, Ohio.
District II.	Marshall, Wetzel, Marion.
District III.	Ritchie, Doddridge, Harrison, Tyler.
District IV.	Pleasants, Wood, Wirt, Gilmer, Calhoun.
District V.	Mason, Jackson, Roane.
District VI.	Putnam, Cabell, Wayne.
District VII.	Lincoln, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX.	Kanawha, Clay, Nicholas, Braxton, Boone.
District X.	Lewis, Randolph, Upshur, Barbour, Webster.
District XI.	Preston, Monongalia, Taylor.
District XII.	Hampshire, Hardy, Grant, Mineral, Pendleton Tucker
District XIII	Berkeley, Jefferson, Morgan

Besides the State cadets, other students are permitted to join the corps for the benefit of drill and exercise.

Uniform.

Upon occasions of military ceremony, drills, etc., cadets are required to appear in uniform. This uniform is of gray cloth and consists of a blouse, trousers and cap, costing complete about $20

Resignation and Discharge.

Cadets who do not expect to return to the corps, in September, should send their resignations to the Commandant about August 15th Those who do not intend to return and fail to send this notice, prevent some one from obtaining an appointment It is but justice to others that their intention to stay away should be known as soon as possible.

Cadets who, expecting to return, find themselves unable to report on the first day of the Fall term, should state their reasons in writing to the Commandant before the first day of the term; and ask for leave of absence to cover the time they will necessarily be absent.

All cadets who fail to report on the first day of the Fall term, and who have not obtained leave of absence, will be discharged and the Regent notified of the vacancy.

Course of Instruction.

LIEUT. RAMSEY, U. S. A.

1 FOR CADETS IN THEIR FIRST YEAR OF SERVICE:

a Practical instruction in infantry drill regulations, including school of the soldier, school of the company, school of the battalion, extended order and ceremonies.

c Practical instruction in guard duties.

2 FOR CADETS IN THEIR SECOND YEAR OF SERVICE:

a Infantry drill regulations same as first year.

b. Practical instruction in artillery drill regulations, including the formation of detachments, manual of the piece, mechanical maneuvers, aiming drill, saber exercise and target practice.

c. Practical instruction in guard duty.

d Theoretical instruction in artillery drill regulations

3. FOR CADETS IN THEIR THIRD YEAR OF SERVICE:

a. Infantry drill regulations same as first year.

b. Theoretical instruction in infantry drill regulations.

c. Practical and theoretical instruction in small arms firing.

d. Practical and theoretical instruction in military signaling.

e Practical instruction in guard duty.

4 FOR CADETS WITH MORE THAN THREE YEARS' SERVICE:

a Practical instruction in infantry drill regulations, excluding school of the soldier.
b. The preparation of military reports and returns.
c. Lectures upon the organization and administration of the United States army.
d. Lectures upon the elementary principles governing in the art of war and the study of important battles and campaigns.
e. Theoretical and practical instruction in guard duty.

The University has an ample equipment for both infantry and artillery and is supplied with ammunition by the Ordnance Department, U. S. Army.

The officers and non-commissioned officers are required to exercise the command and to perform the duties of their offices as in the Regular Army It is believed that such training will improve the young men physically and prepare them to be of great use to their country in case of need.

Roster of Officers.

COMMANDANT OF CADETS.

Date Commission or Warrant.

FRANK DEW. RAMSEY, 1st Lieut. 14th U. S. Infantry, Sept 25, 1891

CADET MAJOR.

WILLIAM C. MEYER.....June 8, 1892

STAFF.

Professor J. W. Hartigan, Surgeon.....Sept. 23, 1892
Cadet Captain C. W. Gore, Captain of Artillery.....Oct. 31, 1891
Cadet 1st Lieutenant F. M. Minshall, Adjutant.....June 8, 1892
Cadet 1st Lieutenant K. White, Signal Officer.....Sept. 29, 1892
Cadet 1st Lieutenant J. L. Henderson, Quartermaster, Nov. 4, 1892

NON-COMMISSIONED STAFF.

Cadet Sergeant Major, A. Warman.....June 8, 1892
Cadet Quartermaster Sergeant, J. Nuzum .....Nov. 5, 1892
Cadet Ordnance Sergeant, J. W. Wiles.....June 8, 1892
Cadet Principal Musician, D. B. Kinkaid..... ... June 8, 1892

CADET CAPTAINS.

1 *Captain of Artillery*.....
2 A. B. Smith, Company A.....June 8, 1892
3 M. Babb, Company B.....June 8, 1892

CADET FIRST LIEUTENANTS.

1 R. H. Ramsay, Company B..... .....June 8, 1892
2 E. L. Hartman, Company A.....June 8, 1892
3 *Adjutant*.....
4 *Signal Officer*.....
5 *Quartermaster*.....

CADET SECOND LIEUTENANTS.

1 W. D. N. Rogers, Company B.....Nov. 5, 1892
W. A. Burdett, Company A.....Nov. 5, 1892

CADET FIRST SERGEANTS.

		Date Commission or Warrant
1	C. E. Carrigan, Company B	Nov. 5, 1892
2	W. G. Swaney, Company A	April 4, 1893

CADET SERGEANTS.

1	J. Dudding, Company B, Color Sergeant	June 8, 1892
2	H. C. Duncan, Company B	Sept. 29, 1892
3	C. N. Ridgway, Color Sergeant Company A	Sept. 29, 1892
4	E. Pearcy, Company B	Nov. 5, 1892
5	*A. E. Boyd, Company A	Sept. 29, 1892
6	G H. A. Kunst, Company A	Nov. 5, 1892
7	C. R. Jones, Company B	Nov. 5, 1892
8	O. J. Chambers, Company A	April 4, 1893

CADET CORPORALS.

1	A. C. Hartley, Company A	October 3, 1892
2	H, A Steed, Company B	October 3, 1892
3	G L. Bambrick, Company A	October 3. 1892
4	C. E. Krebs, Company A	Nov. 5, 1892
5	F. C. Johnson, Company B	Nov. 5, 1892
6	S. P. Boyd, Company A	Nov. 5, 1892
7	H. M. Leps, Company B	Jan. 14, 1892
8	J. Kunkle, Company B	April 4, 1893

CADET CORPORALS OF ARTILLERY.

1	J. G Knutti, Gunner	March 1, 1893
2	W. R. Standiford, Gunner	March 1, 1893
3	J. Kunkle, Caisson Corporal	March 1, 1893
4	M. Perry, Caisson Corporal	March 1, 1893

*For anomalous position of this non-commissioned officer, see Orders No 74, Headquarters Corps of Cadets, 1893.

General Roster of Cadets.

DISTRICT I.—*J. B. Sommerville, Regent.*

Name.	County.	When Enlisted.
1 Meyer, W. C	Hancock	Aug. 31, 1887
2 Bambrick, G. L	Hancock	Sept. 10, 1890
3 Henretta, W. H	Brooke	Sept. 28, 1891
4 Swaney, W. G	Hancock	Sept. 30, 1891
5 Stathers, S. C	Ohio	Sept. 14, 1892
6 Robb, L	Hancock	Sedt. 14, 1892
7 Bambrick, W. L	Hancock	Sept. 14, 1892

DISTRICT II.—*C. L. Smith, Regent.*

1 White, K	Marshall	Sept. 5, 1888
2 Carrigan, C. E	Marshall	Sept. 4, 1889
3 Krebs, C. E	Wetzel	Sept. 10, 1890
4 Jolliff, C. F	Wetzel	Feb. 29, 1892
5 Allemong, W. B	Marshall	Sept. 14. 1892

DISTRICT III.—*J. C. Vance, Regent.*

1 Hughes, J. W	Doddridge	Sept. 10, 1890
2 Standiford, W. R	Harrison	Sept. 28, 1891
3 Moore, G. B	Tyler	Sept 20, 1891
4 Romine, A. P	Harrison	Sept. 14, 1892
5 Cooke, W. L	Doddridge	Sept. 14, 1892
6 Smith, H. F	Harrison	Sept. 14, 1892
7 Charter, L. R	Doddridge	April 5, 1893
8 Shinn, H. H	Doddridge	April 5, 1893

DISTRICT IV.—*R. G. Linn, Regent.*

1 Pearcy, E	Gilmer	Sept. 10, 1890
2 Steed, H. A	Wirt	Sept. 10, 1890

DISTRICT V.—*J. G. Schilling, Regent.*

1 Ramsay, R. H	Jackson	Sept. 19, 1888
2 Gore, C. W	Mason	Sept. 19, 1888
3 Nuzum, J	Jackson	Sept. 12, 1890
4 Chambers, O. J	Roane	April 7, 1891
5 Chambers, B. W	Roane	April 7, 1891
6 Beale, W. L	Mason	Sept. 14, 1892
7 English, J. W. Jr	Mason	Sept. 14, 1892

DISTRICT VI.—*E. A. Bennett, Regen*

	Name.	County.	When Enlisted.
1	Burdett, W. A.	Cabell	Nov. 26, 1888
2	Dudding, J.	Putnam	Sept. 10, 1890
3	Johnson, F. C	Cabell	Sept. 10, 1890
4	Duncan, H. C	Wayne	Jan. 14, 1891
5	Naret, E. L	Putnam	Sept. 14, 1892
6	Toudy, H F	Wayne	Sept. 14, 1892
7	Naret, W. F	Putnam	Sept. 14, 1892
8	McCoy, C. E	Putnam	Sept. 20, 1892

DISTRICT VII.—*W. A. French, Regent.*

1	Perry, M	Logan	Sept. 28, 1891
2	French, G. H	Mercer	Oct. 1, 1891
3	Baker, J. T.	McDowell	Sept. 20, 1892
4	Park, R	Wirt	March 1, 1893

DISTRICT VIII.—*M. J. Kester, Regent.*

1	Jones, C. R	Summers	Sept. 10, 1890
2	Hartley, A. C	Pocahontas	Sept. 10, 1890
3	Kunkle, J.T	Monroe	Sept. 30, 1891
4	Williams, T. M	Greenbrier	Sept. 30, 1891
5	Leps, H. M	Greenbrier	Nov. 11, 1891
6	Brown, J. C	Greenbrier	Sept 15, 1892
7	Walker, L. A	Greenbrier	Sept. 20, 1892

DISTRICT IX.—*J. F. Brown, Regent.*

1	Kinkaid, D. B	Nicholas	Sept. 10, 1890
2	Keely, J	Kanawha	Sept. 14, 1892
3	Rader, A. F	Nicholas	Sept. 14, 1892
4	Allen, E F	Kanawha	Sept. 15, 1892
5	Venable, W. W	Kanawha	Sept. 28, 1892

DISTRICT X.—*T. J. Farnsworth, Regent.*

1	Kunst, G. H. A	Barbour	Sept 24, 1990
2	Knutti, J. G	Randolph	Oct. 12, 1891
3	White, P. F	Lewis	Sept. 14, 1892
4	Woodford, B. H. S	Barbour	Sept 14, 1892
5	Payne, J. B	Barbour	Oct. 13, 1892
6	Friend, L. L	Upshur	Oct. 24, 1892

DISTRICT XI.—*J. Moreland, Regent.*

	Name.	County.	When Enlisted.
1	Wiles, J. W	Preston	Sept. 8, 1887
2	Henderson, J. L	Monongalia	Sept. 7, 1888
3	Warman, A	Monongalia	Sept. 4, 1889
4	Hartman, E. T	Preston	Nov 26, 1889
5	Ridgway, C. N	Monongalia	Sept. 10, 1890
6	Orr, J. M	Preston	Sept. 14, 1892
7	Nuzum, C. A	Taylor	Oct. 17, 1892
8	South, W. H	Monongalia	Nov. 30, 1892

DISTRICT XII.—*John A Robinson, Regent.*

1	Minshall, F. M	Mineral	Aug. 31, 1887
2	Babb, M	Grant	Sept. 4, 1889
3	Haught, O. L	Hardy	Dec. 10, 1891
4	Protzman, J. B	Tucker	Sept. 28, 1892
5	Cramer, C. W	Mineral	Oct. 4, 1892
6	Hess, H. C	Hampshire	Dec. 9, 1892

DISTRICT XIII.—*W. W. Brown, Regent.*

1	Ross, C. W	Berkeley	Sept. 30, 1891
2	Ropp, W	Berkeley	Sept. 14, 1892
3	Baker, H. D	Berkeley	Sept. 14, 1892
4	Noll, A. B	Berkeley	Sept. 14, 1892

VOLUNTEER CADETS.

1	Smith, A. B	Uniontown, Pa	Sept. 10 1888
2	Rogers, W. D. N	Scottdale, Pa	Sept. 4, 1889
3	Boyd, S. P	Uniontown, Pa	Sept. 10, 1890
4	Boyd, A. E	Uniontown, Pa	Sept. 10, 1890
5	Collins, J. H	Uniontown, Pa	Sept. 28, 1891
6	Duncan, W. G	Uniontown, Pa	Oct. 12, 1891
7	Lockwood, F. J	Davis, W. Va	May 16, 1892
8	Sands, W. H	Fairmont, W. Va	Sept. 15, 1892
10	Reichard, L. N	Uniontown, Pa	Stpt 19, 1892
11	Hagan, J. R	Uniontown, Pa	Sept. 21, 1892

Changes and Casualties Since Last Catalogue.

HONORABLY DISCHARGED, 37.

Graduated, 10.

Date	Name.	District	Date Enlistment.
June 8, 1892,	Francis, J. W.	II.,	Sept. 13, 1886.
June 8, 1892,	Alexander, G. M.	XI.,	Sept. 30, 1887.
June 8, 1892,	Holbert, J. T.	II.,	Sept. 4, 1888.
June 8, 1892,	Ford, G. M.	VIII.,	Jan. 30, 1888.
June 8, 1892,	Garlow, E. C.	XI.,	Nov. 4, 1887.
June 8, 1892,	Sisler, C. B.	XIII.,	Sept. 1, 1886.
June 8, 1892,	Coffman, C. C.	III.,	Oct. 18, 1887.
June 8, 1892,	Jaco, L. M	VII.,	Oct. 15, 1887.
June 8, 1892,	Bennett, C. M.	VII.,	Sept. 4, 1889.
June 8, 1892,	Herndon, I. C.	VII.,	Sept. 12, 1890.

The foregoing names are given in order of standing in the Military Department. The names of Cadets J W. Francis and G. M. Alexander appear in the Official Register of the U. S. Army for 1893 as standing highest. Cadets C. M. Bennett and I. C. Herndon were graduates of the Law Department.

Resigned, 27.

April 6, 1892,	Roseberry, A. H.	V.	Sept. 28, 1891.
April 6, 1892,	Manning, F. J. jr.	XIII.,	Sept. 28, 1891.
April 19, 1892.	Hill, J. E.	Vol ,	Sept. 28, 1891.
April 19, 1892.	McWhoeter, J. C.	Vol.,	Jan. 7, 1891.
April 19, 1892,	Cooper, J. T.	Vol.,	Feb. 29, 1892.
April 19, 1892,	Link, W. S.	Vol.,	Oct. 1, 1891.
April 19, 1892,	Hogg, G.	VIII.,	Sept. 4, 1889.
May 5, 1892,	Johnson, J M.	Vol.,	Sept. 10, 1890.
May 16, 1892,	Stewart, W. J.	Vol.,	Sept. 28, 1891.
June 9, 1892,	Moore, J. M.	V.,	Sept. 4, 1889.
June 11, 1892,	Smith, H. W.	III.,	March 8, 1887.
June 11, 1892,	Poe, C. J.	X.,	Sept. 28, 1891.
Sept. 15, 1892,	Pearcy, C. S.	IV.,	Sept. 10, 1890.
Sept. 15, 1892,	Allen, W. H.	IX.,	Sept. 10, 1890.
Sept. 15, 1892,	Barnettt. O. W.	IV.,	Sept. 10, 1890.
Sept. 15, 1892,	Ward, J. E.	X.,	Sept. 28, 1891.
Sept. 15, 1892,	Lemon, J. S.	XIII.,	Oct. 5, 1891.
Sept. 19, 1892,	Duvall, R. P.	Vol..	Sept. 10, 1890.

Sept. 19, 1892,	Williams, A. D.	Vol.,	Sept. 28, 1891.
Sept. 20, 1892,	Johnson, G. W.	XIII.,	Sept. 10, 1890.
Sept. 26, 1892,	Hale, J. E.	Vol.	Sept. 28, 1891.
Oct. 19, 1892,	Paul, J. W,	VII.,	Jan. 23, 1888.
Oct. 20, 1892,	Leonard, W. C. C.	IV.,	Nov. 20, 1891.
Oct. 31, 1892,	Edmiston, M. A.	X.,	Sept. 10, 1890.
Nov. 14, 1892,	Singleton, G. E.	IX.,	Sept. 4, 1888.
Nov. 14, 1892,	Davenport, B.,	XIII.,	Sept. 4, 1889,
Nov. 30, 1892,	Vance, C. E.,	III.,	Dec. 4, 1888.

DROPPED FROM THE ROLL, 26.

Pending Acceptance of Resignation at End of College Year, 12.

Jan. 4, 1893,	Thomas, W. M.,	II,	Sept. 12, 1890.
Jan. 4, 1893,	Arnold, J.,	IV.,	Sept. 27, 1802.
Jan. 4, 1893,	Brinckman, V. E.,	X.,	Sept. 15, 1892.
Jan. 4, 1893,	Bumgarner, Z. H.,	IV,	Sept. 28, 1891.
Jan. 12, 1893,	Simmons, A. J.,	V.,	April 9, 1891.
Jan. 14, 1893,	Curry, J. M.,	Vol.,	Oct. 12, 1892.
Jan. 14, 1893,	Roberts, A. A.,	I.,	Sept 14, 1892.
Jan. 14, 1893,	Thompson, C. C.,	II.,	March 1, 1892.
Jan. 16, 1893,	Freeman, F. S.,	Vol.,	Sept. 14, 1892.
Jan. 30, 1893,	Stillings, C.,	Vol.,	Sept 14, 1892.
Feb. 14, 1893,	Vandall, F.,	IV.,	Jan. 23, 1893.
Mch. 14, 1893,	Montgomery, C. W.,	IX.,	Sept. 14, 1892.

For Absence Without Leave, 4.

Sept. 26, 1892,	Osterling, H. E.	Vol.,	Sept. 18, 1889.
Sept. 26, 1892,	McCreery, H. L.	VII.	Sept. 28, 1891.
Sept. 26, 1893,	Thomas, A. R.	XIII.,	Sept. 28, 1891.
Jan. 14, 1893,	Hagerty, J. E.	IV.,	Oct. 31, 1892.

By Order of the Faculty, 10.

June 11, 1892,	Daily, R. W.	XII.,	Sept. 28, 1893.
June 11, 1892,	Donaldson, G.	IX.,	April 19, 1892.
June 11, 1892,	Crouch, J. W.	X.,	Sept. 28, 1891.
Dec. 12, 1892,	Rowan, F. A.	X.,	Sept. 30, 1891.
Dec. 12, 1892,	Bumgarner, O. H.	IV.,	Sept. 28, 1891.
Jan. 14, 1893,	Hardman, E.	IV.,	Sept. 14, 1892.
Jan. 14, 1893,	McCally, E. W.	I.,	Sept. 14, 1892.
April 10, 1893,	Poindexter, S. P.	IX.,	Jan. 5, 1893.
April 10, 1893,	Willis, W. W.	XII,	Sept. 15, 1892.
April 10, 1893,	Hustead, F. J.	Vol.,	Sept. 28, 1891.

DISHONORABLY DISCHARGED (1.)

For severing connection with Corps without accounting for public property for which he was responsible, 1.

March 21, 1893. Lynn, J H. Vol., Oct. 12, 1892.

RECAPITULATION.

Number of Cadets April 1, 1892		97
New Cadets		55
Total		152
Honorably discharged	37	
Dropped from the roll	26	
Dishonorably discharged	1	64
Number of Cadets April 10, 1893		88

THE PREPARATORY DEPARTMENT.

The Preparatory Department is intended specifically to prepare students for the collegiate classes. Its course of study is arranged with reference to this object, and all students entering the Preparatory Department are required to take the studies that are required for admission to the collegiate course which they expect to enter. Students who are not intending to take a collegiate course must take such studies as they are prepared for and are allowed to take. No special arrangements can be made for them which will interfere wth or embarrass the regular work of the department.

The control of this department is vested in the Preparatory Faculty, consisting of the President of the University, the Principal and teachers of the Preparatory Department. All students in this department, are under the control of this Faculty, except that all questions involving moral delinquency shall be determined by the Faculty of the University.

Entrance Requirements.

The general requirements for admission stated on page 10, apply to the Preparatory Department. In addition thereto, the applicant should be at least fifteen years of age and should have thoroughly accomplished the ordinary course of study in the common schools of the State, including Spelling, Geography, the elements of English Grammar, and Arithmetic through Common Fractions.

No specirl examination is required for entrance to the Junior Class of the Preparatory. Students are admitted *on trial* for the first term, and if they can not keep up with their classes, are required to withdraw from the school.

If a student fails to make a *general average* of 6 on a scale of 10 for the Fall term, in the junior year, he is not allowed to go on. For the Winter term he is required to make an average of 7 and is not allowed to fall below 6 in any study. For the Spring term he must make an average of 7 in each study.

For entrance to the Senior Preparatory year, the applicant must be examined in the studies of the Junior year, or give satisfactory evidence of his proficiency in those studies.

In the Senior preparatory year, each student is required to make an average of 6 *in each stady* for the Fall term. If he fails to do this, he is required to take the study over again, or take private in-

struction and have another examination on the subject, as a condition of continuing in the class. After the Fall term, each student in the Senior year must make an average of 7 in each study, in order to be *passed* at the end of the year.

FEES.

No tuition is charged in the Preparatory department to students who reside in West Virginia, except as limited by the general rule of the Board given on page 15. Students from other states pay $5.00 per term. Upon first entering the school, a matriculation fee of $5.00 is charged to all stndents. Each student also pays a contingent fee each term of $2.00.

Appointed cadets pay no fees.

The course of study in the Preparatory Department is arranged as follows:

JUNIOR YEAR.

Fall Term.

Arithmetic—Greenleaf's Complete—from Common Fractions to Discount.....5 hours a week
English Grammar—(Swinton)—Etymology.....5 hours a week
Latin (commenced).....5 hours a week

Winter Term.

Arithmetic (completed).....3 hours a week
English Grammar—Syntax and English Comp.....5 hours a week
Latin—Grammar and Reader—Chase & Stuart.....5 hours a week
Algebra—Wentworth's Academic—to Fractions....2 hours a week

Spring Term.

Algebra—Wentworth's Academic.....5 hours a week
English Grammar—Anal. Pros. and English Comp..5 hours a week
Latin—Grammar and Reader.....5 hours a week

NOTE—Students in the Junior year of the Preparatory are not allowed to take any other studies than the above.

The classes in the Junior Year are usually taught in two or three divisions. At the end of the Fall term the divisions are re-arranged *according to scholarship*, and those who are not proficient are required to go over the work again, or given special instruction adapted to their needs.

At the end of the Junior Year, students who are not proficient in any study, are required to take the same study the next year.

SENIOR YEAR.

Fall Term.

Algebra—Wells' University—Fractions to Imaginary Quantities ..... 2 hours a week
Cæsar (two books)—Latin Grammar ..... 5 hours a week
Greek—Grammar and Reader (Goodwin) ..... 5 hours a week
Geometry—Wells'—Books 1 and 2 ..... 2 hours a week
Book-keeping ..... 3 hours a week
English Composition—Williams ..... 1 hour a week
Free-hand Drawing ..... 2 hours a week

Winter Term.

Algebra—Imaginary Quantities to progressions ..... 2 hours a week
Cicero's Orations (three orations)—Chase & Stuart's Grammar ..... 5 hours a week
Greek—Grammar and Reader ..... 5 hours a week
Geometry—Books 3, 4 and 5 ..... 2 hours a week
Book-keeping ..... 3 hours a week
English Composition, &c ..... 1 hour a week
Free-hand Drawing ..... 2 hours a week

Spring Term

Book-keeping ..... 3 hours a week
Algebra—Progressions to Logarithms ..... 2 hours a week
Geometry—Plane, completed ..... 2 hours a week
Virgil—Two Books of Æneid; Latin Grammar ..... 5 hours a week
Xenophon's Anabasis (two books), Greek Grammar ..... 5 hours a week
English Composition, &c ..... 1 hour a week
Drawing ..... 2 hours a week

NOTE—Candidates for the degree of Bachelor of Science are not required to take Greek. Candidates for the degree of Bachelor of Arts are not required to take Book-keeping or Drawing.

Shop Work.

The course in the Mechanic Arts is open to students in the Preparatory Department, so that certain portions of this work may be taken in the different shops while the student is preparing to enter the course in Mechanical Engineering. This will relieve him of the equivalent amount of shop work later in his course; provided, however, that such shopwork can be taken without being detrimental to the efficient and thorough pursuit of preparatory studies.

Declamation Prize.

A prize of $15.00 is given each year by the Board of Regents to that student of the Preparatory Department who shall be adjudged the best declaimer by a committee of the Board of Regents. This contest usually occurs on some evening near commencement.

SCHECULE OF RECITATIONS, PREPARATORY DEPARTMENT

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.
MONDAY.	Geometry I. Senior Latin I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law Arithmetic II. English Grammar I.	Geometry II. Senior Latin II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.
TUESDAY.	Senior Latin I. Senior Algebra I. Junior Latin I. Arithmetic I.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
WEDNESDAY.	Senior Latin I. Geometry I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law. Arithmetic II English Grammar I.	Senior Latin II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arthmetic III.
THURSDAY.	Senior Latin I. Senior Algebra I. Junior Latin. Arithmetic I.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
FRIDAY.	Senior Latin I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I.	Senior Latin II. English Composition. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.

NOTE.—Free hand Drawing at 2 P. M., two exercises a week, to be arranged when the Fall term begins.

ALUMNI.

Alumni Association.

Officers for 1892–3.

W. T. W. BARBE.....PRESIDENT.
J. S. STEWART.....SEC'Y AND TREAS.

Academic Graduates.

1870.

Hon. M. H. Dent, A. M., Grafton, W. Va., Judge Supreme Court of Appeals, W. Va.

1871.

O. H. Dille, M. S., Morgantown, W. Va., Farmer.
W. E Joliffe, A. M., Bridgeport, W. Va., Teacher.

1872.

John H. Drabell, A M., Des Moines, Iowa, Lawyer.
A. E. McLane, A. M., Steubenville, Ohio, Merchant.
B. W. Smith, A. M , Minneapolis, Minn., Lawyer.
I. C. White, A. M., Ph. D., Morgantown, W. Va , Geologist.

1873.

Hon. Chas. M. Babb, A. M , Greenland, W. Va., Farmer
D. W. Borden, A. M., M. D , Kearneysville, W. Va., Physician.
W. L. Boughner, M. S., Palatine, W. Va., Farmer.
Hon Jas. F. Brown, A. M., Charleston, W. Va., Lawyer and Regent W. Va. University.
E. T. Bullock, A. M., Parkersburg, W. Va., Lawyer.
John T. Harris, M. S., Parkersburg, W. Va., Court Reporter.
Geo. P Linch, M. S , Atcheson, Kan., Lawyer.
T. B. McLure, M. S., Logan C. H., W. Va., Teacher.
Thos. H. Price, M. S., M. D., Bridesport, Pa., Physician.
W. T Prichard, M. S., deceased.
D. B. Purinton, A. M., LL. D., Granville, Ohio, President Denison University.
M. L. Temple, A. M., Osceola, Iowa, Lawyer.
Jas. T. Waters, A. M., Charleston, W. Va., Lawyer.

1874.

R V. Chadwick, A. M , deceased.
Rev. J. S. W. Dean, A M., Buckhannon, W. Va.
Rev. Wm. M. Howell, A M., Marysville, Kansas, Pastor Presbyterian Church
Hon. T. P. Jacobs, A. M., New Martinsville, W. Va., Judge Fourth Judicial Circuit.
Hon. Chas. W. Lynch, A. M., Clarksburg, W. Va., Pros. Att'y.
Rev. E E. Moran, A. M., Ironton, Ohio, Pastor Presbyterian Church.
Frank Woods, A. M., Baltimore, Md., Lawyer.

1875.

S. S. Adams, A. M., M. D., Washington, D. C., Professor Nat. Med. College.
Rev R. H. Dolliver, A. M., Chicago, Ill., Pastor M. E. Church.
Hon. J. P. Dolliver, A. M , Ft. Dodge, Iowa; M. C., Tenth District, Iowa.
F. A. Golden, B. S., Mansfield, Oregon, Principal Schools.
Jas. V. Martin, A. M., deceased.
J. J. Peterson, Tegucigalpa, Honduras, U. S. Consul.
A. L. Purinton, A. M., Nashville, Tenn., Prof. Chem. Normal College.

1876.

John C. Anderson, M. S., Bakersfield, Cal., Farmer.
L. H. Frazier, A. M., Uniontown, Pa., Lawyer.
H. D. Hubbard, M. S., deceased.
W. O. Ison, A. M., Washington, D. C., Treasury Department.
H. M. Kemp, B. S.
Geo. S. Laidley, M. S., Charleston, W. Va., Supt. City Schools.
Jas. H. Nash, M. S., M. D., Huntington, W. Va., Lawyer.
D. E. Wetzel, M. S., M. D., Huntington, W. Va , Physician.

1877.

W. G. Brown, Jr., A. M., Kingwood, W. Va., Lawyer.
C. B. Dille, A. M., LL.B., Morgantown, W. Va., Lawyer.
J. H. Hawthorne, A. M., Kansas City, Mo., City Judge.
Thos. M. Hood, A. M., M. D , Weston, W. Va., Physician State Asylum for Insane.
D. R. Rogers, A. M., M. D., Reagan, Neb., Physician.
E. C. Smith, M. S., Ravenswood, W. Va , Editor and Lawyer.
H. J. Snively, A. M., North Yakima, Washington, Prosecuting Attorney.
John L. Steele, A. M , Pittsburgh, Pa , City Editor "Chronicle Telegraph."
James S. Stewart, M. S , Morgantown, W. Va., Prof. Math. W. Va University.

1878.

A. F. Courtney, B. S., deceased.
A. G. Dayton, A. M., Philippi, W. Va., Lawyer.
Jas. McM. Lee, A. M., Huntington, W. Va., Supt. City Schools.
Rev. E. J. Marsh, A. M., Santa Barbara, Cal., M. E. Church.
Hon. B. S. Morgan, A. M., Charleston, W. Va., Ex-State Supt. Schools, Lawyer.
Daniel Rich, A. M., Pleasanton, Kansas, Lawyer.

1879.

Geo. D. Purinton, A. M., Ph. D., Prof. Biology, University of Mo.
W. A. Rogers, A. M., Cincinnati, Ohio, Attorney-at-Law.
S. S. Wade, M. S., M. D., Morgantown, W. Va., Physician.

1880.

Chas. E. Grafton, M. S., C. C., Chicago, Ill., Assistant Engineer I. C. R. R.
B. L. Keenan, M. S., Wichita, Kan., Lawyer.
Rev. J. H. Marsh, A. B., Napomo, Cal., Pastor M. E. Church.
Hon. Geo. A. Pearre, Jr., A. M., Cumberland, Md., Attorney-at-Law, State Senator.
Rev. A. A. Waters, A. M., Prof. Natural Science, Hedding Coll., Abingdon, Ill.

1881.

Thos. E. Hodges, A. M., Huntington, W. Va., Principal State Normal School.
Wm. M. Hyland, A. M., Osceola, Iowa, Supreme Court Reporter.
H. N. Ogden, A. M., Morgantown, W. Va., Professor English, West Virginia University.

1882.

T. R. Boyd, A. B., deceased.
Z. K. Brown; A. B., M. D., Mt. Morris, Pa., Physician.
D. H. Courtney, A. B., M. D., Morgantown, W. Va.
A. L. Cox, B. S., Sweetbrier, Texas, Teacher.
Theophilus E. Hodges, A. B., Buckhannon, W. Va., Teacher.
Rev. E. D. Jeffries, B. S., Alderson, W. Va., Pastor Pres. Church.
J. H. Lawhead, B. S., M. D., West Newton, Pa., Physician.
G. C. Lewis, A. B., Pittsburgh, Pa., Lawyer.
Hon. James H. Stewart, A. B., LL. B., Winfield, W. Va., State Senator.

1883.

George C. Baker, A. B , LL. B., Morgantown, W. Va.
W. T. Bland, B. S., LL B., Atcheson, Kansas, Pros. Att'y.
L. M Boyers. A. B., LL. B., deceased.
Benj. Brown, A. B., LL. B., Denver, Col.
S. B. Brown, A. B., Morgantown, W Va., Prof. Geology, West Virginia University.
J. F. Cork, A. B., LL. B., Charleston, W. Va., Lawyer.
Rev. George B. Foster, A m., Toronto, Canada, Professor Philosophy, McMaster University.
Walter Hough, A. B., Washington, D. C., Smithsonian Institution.
John L. Johnston. M. S , C. E , Morgantown, W. Va., Professor Applied Math., West Virginia University.
I. G. Lazzell, A. B., LL. B., Morgantown, W. Va.
J. E. Musgrave, A. B., M D., Handley, W. Va., Physician
S. P. Wells, Jr., B. S., Minneapolis, Minn., General Agent Electric Light Co.

1884.

W. T. W. Barbe, B. S., Parkersburg, W. Va., Editor "State Journal."
R. C. Berkeley, Jr., A. B., C. E., Chicago, Ill , Civil Engineer.
W. H. Michael, A. B., Minneapolis, Minn., Lawyer.
A. L. Robinson, A. B., LL. B., Uniontown, Pa.

1885.

N. D. Adams, A. B., Scott City, Kansas, Editor.
Robert Armstrong, B. S., Point Pleasant, W. Va , Business.
A. B. Bush, A. B., ———— Miss., Teacher.
Harvey Fleming, B. S., Washington, D. C , Agent Colorado Press.
B W. Meadows, A. B., deceased.
Hon. J. D. Sweeney, B. S., Concord Ch., W. Va., Principal Concord Normal School.
R. W. Tapp, A. B., deceased.

1886.

R. A. Armstrong, A. M., West Liberty, W. Va., Prin. West Liberty Normal School.
W. N. Berkeley, A. B., Ph. B., M. D., Montana.
R. W. Dawson, A. B., LL. B., Uniontown, Pa.
T. R. Shepherd, A. B LL. B., Huntington, W. Va.
Rev. N. M. Waters, A. B., B. D., Dubuque, Iowa, Pastor M. E. Church.
Z. F. Yost, B. S., Morgantown, Law Student

1887.

J. E. Charles, B. S., Point Pleasant, W. Va., Business.
E. S. Elliott, A. B., LL. B., Chicago, Ill.
H. C. Ogden, A. B., Wheeling, W. Va., Editor "Evening News."
Thos. G. Rector, B. S., Argentine Republic, S. A., Signal Service.
Leroy Swann, B. S., Connellsville, Pa., Business.

1888.

Jas. D Cox, B S., M. D., Bradford, Pa.
H H. Emmert, B. S., LL. B., Martinsburg, W. Va.
Hon. C. Hartmeyer, A. B., Bruceton, W. Va.
Rev. H. H. Ryland, A. B., ———, Pa., Pastor Presbyterian Church.
Frank Snider, A. A , Senitobia, Miss , Prin. Schools.

1889.

B. C. Alderson, A. B., Post-graduate student, Chicago University, Ill.
J. E. Brown, B. S., LL. B., Chicago, Ill.
G. B. Chorpening, B. S. Clarksburg, W. Va.. Civil Engineer.
Jas. E. Dawson, A. B., LL. B., Uniontown, Pa.
Chas. N. Finnell, A. B., Morgantown, W. Va , Law Student.
G. G. Heiner, A. B., West Point N. Y., Cadet U. S. Mil. Academy.
A. J. Hare, A. B., Morgantown, W. Va., Instructor W. Va. University.
J. A. Jackson, A. B., Kingwood, W. Va., Lawyer.
Rev. L. A. Lindemuth, A. B., Wheeling, W. Va.
Chas. Rankin, B. S., Roanoke, Va., Civil Engineer N. & W. R. R.
Rev. J. L. Roemer, A. B., Cleveland, Ohio, Pastor Presbyterian Church.
Rev. H. G. Stoetzer, A. B., Wheeling, W. Va.

1890.

Harvey Brand, A. B., Morgantown, W .Va., Principal City Schools.
F. W. Clark, A B., LL. B., New Martinsville, W. Va.
L. J. Corbly, A. B., Clarksburg, W. Va., Principal City Schools.
Bert. H. Hite, B. S., Post Graduate Student John Hopkins University.
W. F. Reynolds, A. M., Post Graduate Student Chicago U., Ill.
F. C Reynolds, A. B., Keyser, W. Va., Pros. Attorney.
E. H. Vickers, A. B., Harvard University.
Rev. E. E. Woodson, A. B., Morgantown, W. Va., Pastor Baptist Church.

1891.

A. B. Cooper, A. B., Western Theo. Sem., Chicago. Ill.
J. E. Davis, A. B., LL. B., Trinidad, Col.
C. R. Duvall, B. S , Post Graduate Student Johns Hopkins U.
J. E. Galford, B. S., Weston, W. Va., Principal City Schools.
U. S. G. Hayes, B. S., Grafton, W Va., Assistant Principal School.
C McC. Lemley, C. E , Pittsburgh, Pa., Civil Engineer Pa. R. R.
T. D. Lynch, C. E , Pittsburg, Pa.
Hattie E. Lyon, A. B., Fredonia, N. Y.
M. D. Post, A. B., LL. B , Wheeling, W. Va.
F. G. Ross, C. E., Pittsburgh, Pa , Civil E gineer Penn. R. R.
J. R. Trotter, A. B , Clarksburg, W. Va., Teacher High School
Chas. L. White, A. B., Princeton Theological Seminary.
P. C. White, A. B., Princeton Theological Seminary.
DeWitt White, A. B., Princeton Theological Seminary.

1892

G. M. A'exander, B. S., LL. B , Fairmont, W. Va.
Carroll C. Hoffman, B. S. C. E., Pittsburgh, Pa.
George M. Ford, A B.. Terra Alta, W. Va., Teacher.
J. W. Francis, A. B., Student Western Theo. Sem., Chicago, Ill.
Ezra C. Garlow, B. S. C. E., Pittsburgh, Pa.
John A Grier, B. S., Parkersburg, W. Va.
J. M. Hackney, A. B., Morgantown. Business.
J. T. Holbert, B S., C. E., Pittsburgh, Pa.
Rev. Hough Houston, A B , Yonkers, N. Y , Pastor M. E. Church
Rev. Lin M. Jaco, A. B., Easton, W. Va., Pastor Baptist Church.
Charles B. Sisler, A. B., Pittsboro, Miss., Prin. M. & F. Coll
E. L. Zearley. B. S., C. E., Pittsburgh, Pa.

Law Graduates.

1879.

William R. Thompson, Hinton.

1880.

Frank T. Haymond, Morgantown.
Waitman T. Houston, Morgantown.

1881.

E. W. Bedinger, Kentucky.
Samuel C. Kelly, Uniontown, Pa.

1882.

Arthur L. Cox, Marion county.
L. C. Tabb, Jefferson county.

1883.

Frank Cox, Morgantown.
S. A. Hays, Glenville.
Melville Peck, Philippi.
William Rich, Pleasanton, Kansas.
John W. Wiltshire, Charlestown.

1884.

Meigs Bland, Clarksburg.
W. T. Bland, B. S., Atcheson, Kansas
J. F. Cork, A. B., Charleston.
I. G. Lazzell, A. B., Morgantown.
Hon. B. S. Morgan, A. B., Charleston.

1885.

B. L. Keenan, M. S., Kansas.
F. Lively, Summers county.
James H. Stewart, A. B., Winfield.
Hon. W. S. Steuart, West Union.
H. J. Sturgis, Smithfield, Pa.

1886.

George C. Baker, A. B., Morgantown, Pros. Att'y.
L. M. Boyers, A. B., deceased.
C. B. Dille, A. B., Morgantown.
R. E. Fast, Morgantown.
S. M. Musgrove, Point Pleasant.
H. L. Robinson, A. B., Uniontown, Pa.

1887.

R. E. L. Blackwood, Charleston.
R. W. Dawson, A. B., Uniontown, Pa.
E. S. Elliott, A. B., Chicago, Ill.
T. H. Keenan.
J. M. McGrath, Lewisburg.
A. L. Romine, Clarksburg.
E. P. Rucker, Princeton.
J. W. Smith, deceased
M. F. Snyder, West Union.

1888.

Charles A. Clark, Hinton.
Alexander Dupuy, Louisiana.
Melville H. Fleming, Fairmont.
Lewis C. Lawson, Clarksburg.
R. K. McComb, Point Pleasant.
A. F. Morris, Huntington.
Geo. I. Neal, Huntington.
U. S. G. Pitzer, Martinsburg, Prosecuting Attorney.
Thos. R. Shepherd, A. B., Huntington.
Joseph J. Woofter, Mississippi.

1889.

W. M. B. Cornwell, Romney.
N. C. McNeil, Pocahontas county.
W. L. P. Peyton, Kansas.
Stewart F. Reed, Clarksburg, Editor "Telegram."
Ed. G. Smith, Clarksburg.
J. F. Wilson, Grafton.
Thos. Y. Yates, Taylor county.

1890.

A. S. Alexander, Charleston.
J. E. Chipley, Moorefield.
F. H. Garrett, Ohio.
D. L. Jamison, A. B , Parkersburg.
Robt. L Keadle, Union, Prosecuting Attorney.
Tucker H. Ward, Randolph county.

1891.

Benj. F. Bailey, Taylor county.
S. E. Boggess, Spencer, Prosecuting Attorney.
Lynn Brannon, Glenville.
Jas. E. Brown, B. S., Chicago.
W. L. Camden, Fairmont
Frank W. Clark, A. B., New Martinsville.
L. J Cobun, Preston county.
T. J Cummings, Weston.
Jas E. Davis, A. B. Trinidad, Col.
Jas. E. Dawson, A. B., Uniontown, Pa.
W. E. Hines, Monroe county.
R. E. L. Hutchinson, Huntington.
C. E Morris, Pleasant Green, Ohio.
E. H. Morton, Addison.
W. S. O'Brien, Weston.
C B. Riggle, Middelbourne.
J. B. Settle, Fayetteville.
C. R Summerfield, Fayetteville.

1892.

Geo. M. Alexander. Fairmont.
John A. Bell, Huntington.
Cary M. Bennett, Glenville.
John J. Carney, Parkersburg.
John S. Cogar, Addison.
John R. Darrah, Washington, Pa.
Richard L. Fleming, Morgantown
C. B. Hall, Morgantown.
J. W. Harmon, Petersburg, W. Va.
H. W. Harmer, Clarksburg.
I. C. Herndon, Hinton.
W. Kauroku, Yale University.
I. R. Mattingly, Kingwood.
J. H. Morris, Parkersburg.
C. M. Murphy, Philippi.
A. S. Poling, Philippi.
M. D. Post, Wheeling.
A. G. P. Price, Marlington.
E. M. Showalter, Fairmont

CATALOGUE OF STUDENTS.

Abbreviations: A. B., Classical course; B. S., Scientific course; C. & M. Engin., Civil and Mining Engineering course; Mech. Engin., Mechanical Engineering course; B. Agr., Agricultural course. Students marked *special* are not pursuing regular courses. Prep., Preparatory students.

NAMES.	RESIDENCE.	COURSE.
Alderson Charles Marion	Asbury	Law
Alderson, George Newman Lee	Alderson	Special
Allemong, Walter Burton	Cameron	Prep
Allen, Ebner Frank	Montgomery	Prep
Allen, Robert E. Lee	Lima	A. B
Arnold, Jackson	Arnold	Prep
Babb, Macker	Medley	B. S
Baker, Harry Duchart	Martinsburg	Prep
Baker, James Theodore	Elkhorn	Special
Baker, Lorena	Morgantown	B. S
Bambrick, George Loren	New Cumberland	B. S
Bambrick William Clayton	New Cumberland	Prep
Barlow, John Henry Sebastian	Howesville	Prep
Barracklow, Henry Waters	Dunbar, Pa	Prep
Beale, William Lewis	Point Pleasant	Prep
Boyd, Alpheus Edward	Uniontown, Pa	A. B
Boyd, Samuel Patterson	Uniontown, Pa	B. S
Brinkman, Victor Emanuel	Weston	Prep
Brown, John Mathew Guy	Morgantown	Prep
Brown, Joseph Clark	Alvon	Special
Brownfield, G. Hustead	Fairmont	Prep
Bumgarner, O. H	Elizabeth	Prep
Bumgarner, Z. H	Elizabeth	Prep
Burdett, William Alexander	Ona	A. B
Carrigan, Charles Edgar	Sherrare	A. B
Casselberry, John L	Morgantown	Special
Chambers, Bailey Wilson	Walnut Grove	Law
Chambers, Okey Johnson	Walnut Grove	Law
Charter, Lathrop Russel, Jr	West Union	Prep
Cole, Harry Outen	Seven Pines	Prep
Collins, James Higbee	Uniontown, Pa	Special
Conley, William Gustavus	Preston co	Law
Cooke, William Leroy	Johnstown	Prep
Cooper, John T	Parkersburg	B. S
Cox, Lawrence Morgan	Uffington	Prep
Cox, Napoleon Brock	Osgood	Special
Craft, Fred Ewing	Merrittstown, Pa	Prep
Cramer, Charles William	Piedmont	Prep
Curry, John Morrow	Uniontown, Pa	Prep
Curry, William Boyd	Uniontown, Pa	Prep
Cutright, William Bernard	Buckhannon	A. B
Davenport, Braxton	Charlestown	B. S
Davis, Frederick Arthur	Morgantown	Prep
Davis, Stephen Rephard	Laurel Point	Prep

NAMES.	RESIDENCE.	COURSE
Day, Syl. Hamilton, A. B., P. D.,	Morgantown	Law
Dille, Thomas Reay	Morgantown	Prep
Dorsey, George Frederick	Morgantown	A. B
Dorsey, Luther Thornton	Morgantown	Prep
Douglass, Floyd	Douglass	Prep
Dudding, Jerome	Winfield	Special
Duncan, Henry Clay	Kenova	Special
Duncan, William Gray	Uniontown, Pa	Special
Eddy, Mary	Beulah	B S
Eddy, William J	Morgantown	A. B
Elliott, Charles Sho'well	Redstone, Pa	Prep
English, John Warth, Jr	Pt. Pleasant	Prep
Finnell, Charles Newton	Morgantown	Law
Fleming, Hayward	Webster	Special
Foster, John Gille-pie	Coldwater	Law
Franks Holly Wilkinson	New Geneva, Pa	Prep
Freeman, Frank Smythe	Anderson	Prep
Freeman, Frank Wright	High House, Pa	Prep
French, George Henderson	Princeton	Special
Friend, Lloyd Lowndes	Morgantown	Prep
Garlow, Lulu	Maidsville	A. B
Giffin, James Vincent	R ney's Point	Special
Glasscock, Samuel Fuller	Morgantown	Law
Goodwin, Charles Allen	Morgantown	Law
Gore, Claude Webster	Clarksburg	A. B
Gorman, James	Morgantown	Law
Gorman, Michael E	Morgantown	A. B
Gorman, R	Morgantown	Prep
Graham, Samuel Wiley	Masontown	A. B
Grant, Dale	Morgantown	Prep
Hackney, Ida E	Morgantown	B. S
Hackney, Lilian May	Morgantown	A. B
Hagan, John Robert	Uniontown, Pa	Prep
Hagans, Elizabeth Ludington	Morgantown	Special
Haggerty, John Edgar	Creston	Prep
Hall, Brice Holland	Fairmont	Mech. Engin
Hamrick, Troy	Switzer	Prep
Haney, James Franklin	Uniontown, Pa.	Prep
Hanshaw, James Edgar	Burton	Special
Hardman, Everet't	Grantsville	Prep
Harding, Clare Wilmouth	Beverly	Prep
Hartle, Elias Brumbaugh	Hagerstown, Md	Law
Hartley, Alva Camden	Masontown	Special
Hartman, Edward Thornton	Tunnelton	A. B
Haught, Orestes Lloyd	Silver Hill	Prep
Henderson, Joseph Lindsey	Morgantown	A. B
Henretta, William Huston	Moundsville	Prep
Hess, Harry Clyde	Laurel Point	Prep
Hill, John Emmett	Fredericktown, Pa	Special
Hinton, Charles Ross	Gap Mills	Prep
Hitchens, Charles Pritchard	Morgantown	Prep
Hoff, Silas Marion	Auburn	Prep
Hogg, Gory	Sewell Depot	Special
Holden, William Jackson	Craigmoor	A. B
Holland, Allen	Grafton	Prep
Hughes John Wilbur	Troy	C. & M. Engin
Humphrey, Selden Dennison	Belleville	Special
Hustead, Frederick John	Uniontown, Pa	Prep
Hoe, William Thomas, Jr	Philippi	Prep
Ireland, Archibald J. Wilson	Morgantown	Prep
Jacob, Samuel Sprigg, Jr	West Liberty	B. S

NAMES.	RESIDENCE.	COURSE
Jenknis, Samuel Rozel	Grafton	C. & M. Engin
Johnson, George William	Leetown	A. B
Johnson, James Martin	Morgantown	B. Agr.
Johnson, Thomas Carskadon	Morgantown	B. S
Joliff, Clarence Franklin	Uniontown, W. Va	Prep
Jones, Clement Ross	Knottsville	C. & M. Engin
Keeley, Josiah	Charleston	A. B
Kinkaid, Dell Busee	Knottsville	A. B
Kinkaid Ira	Halleck	Prep
Knutti, John Gottlieb	Alpena	Prep
Krebs, Charles Edward	New Martinsville	C. & M. Engin
Kunkle, Justin	Alderson	Mech. E gin
Kunst, George Henry A	Pruntytown	A. B
Lavelle, Thomas Monahan	Uniontown, W. Va	C. & M. Engin
Lawhead, Sallie	Morgantown	Special
Le Masters, Morgan	Cross Roads	Special & Law
Leps, Henry Moore	Frankford	Prep. & Mech. Engin
Lockwood, Frederick J	Davis	Prep
Longanecker, J. C	Morgantown	Special
Lowenstein, Isaac	Charleston	Special
Lynn, Jacob Henderson	Uniontown, Pa	Prep
Madagan, Nora	Morgantown	Special
Madagan, William Christian	Morgantown	Prep
Martin, Charles Reuben	Middlebourne	Law
Martin, Philip Britton	Herring	B. S
Mayers, Clarence Edwin	Fairmont	B. Agr
McBee, Perry Caleb	Halleck	Prep
McClung, James Warwick	Lowell	Prep
McCoy, Charles Ephraim	Buffalo	Prep
McCully, Edgar Winfield	Wheeling	Prep
McGinnis, John Douglas	Raleigh	Law
McWhorter, John Carmillus	Buckhannon	Special
McWhorter John Scott	Buckhannon	Special
Meyer, William Charles	Wheeling	A. B
Miller, J. Smith	Pittsburg, Pa	Prep
Minshall, Frederick Mortimer	Piedmont	C & M Engin
Montgomery, Charles William	Charleston	Special
Moore, Bismark G	Proctor	Prep
Morris, Robert Lee	Teay's Valley	Special
Naret, Edward Lindon	Morgantown	Prep
Naret, William Frazier	Morgantown	Prep
Nelson, Jesse Francis	Capon Bridge	Prep
Noll, Allen Billmyre	Martinsburg	Prep
Norris, Sallie Lowther	Glenville	A. B
Nowlan, Elmer Woodford	Alderson	Prep
Nuzum, Charles Augustus	Grafton	Prep
Nuzum, John	Garfield	A. B
Orr, James Morgan	Kingwood	Prep
Park, Robert	Lucile	Prep
Parsons, William Oscar	Jackson C. H	Prep
Payne, John Bosworth	Philippi	Prep
Pearcy, Evart M	Normantown	Prep
Peters, John Atkinson	Empire, Ohio	C. & M. Engin
Perry, Elmer Martin	Fort Spring	Special
Perry, Mark	Fort Spring	Special
Pondexter, Spicer Patrick	Charleston	Prep
Protzman, Blanche	Morgantown	B. S.
Protzman, Jesse Boardman	Morgantown	A. B
Rader, Archibald Heming	Enan	C. & M. Engin
Ramsay, Robert Hudson	Clarksburg	B. S
Reichard, Lewis Nyman	Brownsville, Pa	Prep

NAMES	RESIDENCE.	COURSES
Reynolds, Ethel	Morgantown	B. S
Reynolds, Warren Washington	Clarksburg	Prep
Ridgeway, Charles Nelson	Maidsville	A. B
Robb, Lewis James	New Cumberland	Prep
Roberts, Arthur Augustine	Wellsburg	Prep
Rogers, Walter Dudley Neal	Scottdale, Pa	A. B
Romine, Alexander Pickens	Johnstown	Prep
Ropp, William Daniel	Kingwood	Prep
Ross, Charles W	Hedgesville	Prep
Rowan Frank Asbury	Beverly	Prep
Russell, Benjamin W	Morgantown	A. B
Sample, Charles Washington	Randall	Prep
Sanders, James Clark	Maidsville	Prep
Sands, William Hupp	Fairmont	Prep
Scott, George Brinton	Elkins	Law
Seavert, William Helman	Lima	Prep
Sheppard, Addison Hite	Reedy Ripple	A. B
Shinn, Henry Hubert	Central Station	Prep
Simmons, Harvey Jefferson	Spencer	Prep
Smith, Andrew Brown	Uniontown, Pa	A. B
Smith, Harvey Ferris	West Milford	Prep
Snyder, Lewis Clark	Laurel Point	Prep
South, Robert Biddle	Morgantown	Special
South, Walter	Morgantown	Prep
South, Winnie Orienta	Morgantown	Special
Standiford, William Russell	Elm Grove	Prep
Stathers, Silas Charles	Wheeling	C. & M. Engin
Steed, Henry Alfred	Newark	Law
Stevens, William W	Alderson	Special
Stewart, Edgar Burchart	Martinsburg	Prep
Stinger, George Hughes	Cameron	Mech. Engin
Stillings, Charles Edward	Mannington	Prep
Strader, Judson Floyd	Beverly	A. B
Strum, Marshall L	Mannington	Law
Summers, Patrick McDowell	Clay C. H	Prep. & Law
Swanay, William Grafton	New Cumberland	Special
Sycks, Silas Lewis	Cameron	Special
Tait, Alexander Gordon	Randall	C. & M Engin
Talbott, Richard Edward	Philippi	Law
Taylor, Lewis Robert	Wadestown	Prep
Thomas, William Marion	Farmington	Prep
Thompson, Carl Clifton	Uniontown, Pa	Prep
Tudy, Henry Frederick	Fleming	Prep
Vandall, Floyd	Custer	Prep
Venable, William Walton	Charleston	C. & Mech. Engin
Walker, Luther Aloxander	Indian Mills	Prep
Warman, Altha	Morgantown	A. B
Warne, Boyd Emery	Washington, Pa	Law
Wharton, William Lindsay	Randall	Prep
Whetzell, Horatio Seymour	Kingwood	Law
White, Anna Belle	Morgantown	B. S
White, Bennett Sexton	Morgantown	B. S
White, Henry Middleton,	Camden	Prep
White, Kemble	Belton	A. B
White, Stella Sarah	Morgantown	B. S
White, William Pitt	Camden	Prep
Wickline, William Anderson	Hinton	Special
Wiles, John William	Morgantown	A. B
Willey, Waitman Thomas	Morgantown	Prep

NAMES.	RESIDENCE.	COURSE
Williams, Thomas Marion	Ewell	Prep
Woodford, Benjamin Holly	Scott Pleasant Creek	Prep
Yost, Zoath Freeman, B. S.,	Morgantown	Law

Total.....228

Largest enrollment heretofore (1891-92): 224.

Distribution by Departments.

COLLEGIATE DEPARTMENT:	
In A. B. Course, *for degree*	33
In B. S. course, *for degree*	17
In C. and M. Engineering course, *for degree*	11
In Mech. Engineering course *for degree*	4
In B. Agriculture course, *for degree*	2
Special students, not candidates for a degree	34
Total in collegiate department	101
LAW DEPARTMENT	22
*PREPARATORY DEPARTMENT	108
	231
Deduct (1 special, 2 Preparatory) counted twice	3
Total	228
MILITARY DEPARTMEMT.	
Appointed cadets	102
Volunteer cadets	1
Total	120
Male students	214
Female students	14
STATES REPRESEMTED.	
West Virginia	206
Fennsylvania	21
Ohio	
Total	228

Representation by Counties in West Virginia

Barbour	5	Mercer	1
Berkeley	5	Mineral	2
Brooke	1	Monongalia	57
Cabell	1	Monroe	4
Calhoun	1	Nicholas	1
Clay	1	Ohio	5
Doddridge	3	Preston	8
Gilmer	2	Putnam	5
Grant	1	Raleigh	1
Greenbrier	6	Randolph	5
Hancock	5	Ritchie	1
Hampshire	1	Roane	3
Harrison	8	Summers	3
Tucker	4	Taylor	7
Jefferson	2	Tucker	1
Kanawha	6	Tyler	4
Lewis	4	Upshur	3
Logan	1	Wayne	2
Marion	8	Wetzel	6
Marshall	7	Wirt	7
Mason	3	Wood	2
McDowell	1		
		Total	206

*All students not having the larger part of their work in some other department are classed as Preparatory students. Many of those classed as Preparatory, have one or more studies in the collegiate department.

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The West Virginia Agricultural Experiment Station, in accordance with the provisions of the Act of Congress establishing, it is organized in connection with the W. Va., University. The State of West Virginia makes no appropriation for the support of this institution and never has. The University assigned it a building which has been enlarged and elaborately equipped for the purposes of an Agricultural Experiment Station, at station expense. It is provided with chemical, botanical, microscopical and etomological laboratories, each of which is provided with elaborate supplies of the most modern and approved apparatus for carrying on scientific investigations. In addition to the laboratories the building has proper offices for executive and clerical work and arrangements for preserving its collections and the results of scientific work conducted at the statian, together with a valuable library.

The objects of the station are stated as follows in the act establishing it:

Section 2. "That it shall be the object and duty of said Experment Station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same, the chemical composition of useful plants at their different stages of growth; the comparative odvantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test the comparative effects of crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

The State publishes the results of the scientific investigations in the bulletins and annual reports of the Experiment Station, which are distributed free of charge to farmers and other citizens of the

State desiring them. The mailing list of the Station is over 31,000 names. The Station, during the past year, has devoted a large share of its energies to the study of the insect pests, and has made strenuous efforts to check the destruction of our extensive pine forests, which is going on so rapidly. All of the fertilizers sold in the State are analyzed at the Station, and a large amount of horticultural work has been lately undertaken, together with a great variety of other investigations bearing directly upon the Agricultural development of the State. The staff of the Station also conducts a very extensive correspondence with the farmers of the State upon subjects in which they are immediately and personally interested. The Staff also assists in all farmers' institutes held in the State, and attends all farmers' meetings to which it is invited. The Experiment Station is endeavoring loyally and faithfully to carry out the objects for which it was organized, and should prove a great blessing to the farmers of the State

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seed, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators must be subject to such regulations as may be prescribed; work in the Station having no relation whaetver to the course of college studies.

FARMERS' SHORT COURSE IN AGRICULTURE.

In order to meet a possible demand among the progressive farmers of the State, especially the young men, for information both scientific and practical upon matters of daily interest to agriculturists, there has been arranged a short course of lectures by teachers and workers in the University and the Experiment Station, which are intended to give in a condensed form the results of study and experiment in the various subjects pertaining to the practical work of the farm.

No charge will be made for this course of lectures. They are absolutely free to any person in West Virginia who will attend them. The only expenses will be the necessary traveling expenses and cost of board and lodging in Morgantown of those who attend. Board and lodging will cost from $3.50 to $4.00 per week. The lectures will begin on Wednesday, February 7th, 1894, and continue through Tuesday, February 20th, 1894, there being four lectures, one hour in length, each day except Sunday.

All persons attending these lectures must enroll, either by letter or in person. Address

E. M. Turner, *President.*

Wednesday, February 7th, 1893.

1. Agricultural Education ..... President E. M. Turner.
2. Origin of Soils ..... Prof. S. B. Brown.
3. Chemistry of the Soil ..... Dr. R. J. J. de Roode.
4. Modification of the Soil by Cultivation ..... Dr. J. A. Myers.

Thursday, February, 8th.

1. Land Drainage ..... Col. D. D. Johnson.
2. Function of the Soil in Plant Production ..... Dr. J. A. Myers.
3. Fertilizers and Manures ..... Dr. R. J. J. de Roode.
4. Science and Art of Horticulture ..... Mr. F. W. Rane.

Friday, February 9th.

1. Relations of Geology to Agriculture ..... Prof. S. B. Brown.
2. What is an Insect ..... Mr. A. D. Hopkins.
3. The Atmosphere in its Relation to Agriculture ..... Prof. A. R. Whitehall.
4. What is a Plant? ..... Prof. J. W. Hartigan.

Saturday, February, 10th.

1. Chemistry of Plants ..... Dr. R. J. J. de Roode.
2. Food and Variability of Plants ..... Mr. F. W. Rane.
3. Structure and Classification of Insects ..... Mr. A. D. Hopkins.
4. Rotation of Crops ..... Col. D. D. Johnson.

Monday, February, 12th.

1. Heredity in Animals ..... Prof. J. W. Hartigan.
2. Theories of Descent of Plants ..... Mr. F. W. Rane.
3. Stock Breeding ..... Col. D. D. Johnson.
4. Injurious Insects and Parasites ..... Mr. A. D. Hopkins.

Tuesday, February 13th.

1. Animal Physiology ..... Prof. J. W. Hartigan.
2. Care and Feeding of Animals ..... Col. D. D. Johnson.
3. Classification of Foods ..... Dr. J. A. Myers.
4. Insects of the Farm, Orchard and Garden ..... Mr. A. D. Hopkins.

WEDNESDAY, FEBRUARY 14TH.

1. Viticulture and Orchard Culture.....Mr. F. W. Rane.
2. Feeding for a Purpose.....Dr. J. A. Myers.
3. The Water We Drink.....Prof. A. R. Whitehill.
4. Farm Buildings and Fences.....Col. D. D. Johnson.

THURSDAY, FEBRUARY 15TH—ECONOMY DAY.

1. Farm Accounts.....Prof. T. C. Atkeson.
2. Physical Forces as Related to Agriculture.....Prof. A. R. Whitehill.
3. Farm Economy.....Col. D.. D. Johnson.
4. Wastes of the Farm.....Dr. J. A. Myers.

FRIDAY, FEBRUARY 16TH—SHEEP DAY.

1. Adaptability of West Virginia Soils to Sheep Raising.....Prof. S. B. Brown.
2. Fine Wool Sheep.....Col. D. D. Johnson.
3. Profitable Lines of Sheep Husbandry.....Mr. A. D. Hopkins.
4. Sheep Husbandry.....Prof. T. C. Atkeson.

SATURDAY, FEBRUARY 17TH—DAIRY DAY.

1. Dairying.....Prof. T. C. Atkeson.
2. Dairy Breeds of Cattle.....Col. D. D. Johnson.
3. Milk and Butter.....Dr. J. A. Myers.
4. Animal Parasites.....Mr. A. D. Hopkins.

MONDAY, FEBRUARY 19TH.

1. Olericulture.....Mr. F. W. Rane.
2. The Nitrogen Question.....Dr. R. J. J. de Roode.
3. Wonders of Insect Life.....Mr. A. D. Hopkins.
4. Diseases of Animals.....Prof. J. W. Hartigan.

TUESDAY, FEBRUARY 29TH—ROAD DAY.

1. Road Making.....Prof. T. C. Atkeson.
2. Taxation and Transportation.....Col. D. D. Johnson.
4. Road Legislation.....President E. M. Turner.

COMPARATIVE VIEW OF COURSES FOR BACHELOR DEGREES.

		A. B.	B. S.	B. S. C. E.	B. S. M. E.	B. AGR.
FIRST YEAR.		*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*
	8½	Physics....3	Physics....3	Physics....3	Physics....3	Algebra....2
	9½	Latin and Greek....5	French....5	French....5	French....5	Book Keeping 3 El. Agr. 2....5
	10½	Math....4	Math....4	Math....4	Math....4	Geom. 2. Eng. 1....3
	11½	English....3	English....3	English....3	English....3	Chem. 3, Polit. Econ. 2....5
	2	....	....	Drawing....2	Shopwork....3	....
		Winter Term.	*Winter Term.*	*Winter Term.*	*Winter Term.*	*Winter Term.*
	8½	Physics....3	Physics....3	Physics....3	Physics....3	Algebra....2
	9½	Latin and Greek....5	French....5	French....5	French....5	Book-keep. 3. Farm Econ. 2....5
	10½	Math....4	Math....4	Math....4	Math....4	Geom. 2. Eng. 1....3
	11½	English....3	English....3	English....3	English....3	Chem. 3. Botany 2....5
	2	....	....	Drawing....2	Shopwork....3	....
		Spring Term.	*Spring Term.*	*Spring Term.*	*Spring Term.*	*Spring Term.*
	8½	Physics....3	Physics....3	Physics....3	Physics....3	Algebra....2
	9½	Latin and Greek....5	French....5	French....5	French....5	Book Keep. 3, Farm Law 2....5
	10½	Math....4	Math....4	Math....4	Math....4	Geom. 2. Eng. 1....3
	11½	English....3	English....3	English....3	English....3	Chem. 3, Botany 2....5
	2	....	....	Drawing....2	Shop-work....3	....
SECOND YEAR.		*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*
	8½	Latin 3, Greek 2....5	Math....3	Cal. 3. Geol. 2....5	Calculus 3, Geol. 2....5	Phys. 3, Agric. 2....5
	9½	Hist. 2, Rhet. 2....4	Hist. 2 Rhet. 2....4	Surveying....4	Land Survey....4	Zoology....3
	10½	Greek....1	French....3	French....3	....	Algebra 2, Geom. 2....4
	11½	Chem. 3, Polit. Econ. 2....5	Chem. 3, Polit. Econ. 2....5	Chemistry....3	Chemistry....3	Englsh....3
	2			Field Practice....4	Shop work....2	
					Physical Lab....2	
		Winter Term.	*Winter Term.*	*Winter Term.*	*Winter Term.*	*Winter Term.*
	8½	Latin 3, Greek 2....5	Math....3	Calculus....3	Calculus....5	Physics 3, Stockbreed, 2....5
	9½	Hist 2, Rhet. 2....4	Hist. 2. Rhet. 2....4	Descrip Geom....4	Descrip. Geom....4	Zoology....3
	10½	Greek....1	French....3	Geol. 2, French 3....5	Geol....2	Trigonomery....4
	11½	....	....	....	Chemistry....3	Englsh 3....3
	2	Chem. 3 Bot. 2....5	Chem. 3, Bot. 2....5	Chemistry....3	Draw. and Shop-work....4	
				Drawing....4	Phys. Laboratory....2	
		Spring Term.	*Spring Term.*	*Spring Term.*	*Spring Term.*	*Spring Term.*
	8½	Latin 3, Greek 2....5	Math....3	Calculus....3	Calculus....3	Phys. 3, Hortic. 2....2
	9½	Hist. 2, Rhet. 2....4	Hist. 2, Rhet. 2....4	Surv (Trig and Mine.)....4	Mechanism....5	Phys. & Hygiene....5
	10½	Greek....1	French....3	Geol. 2, French 3....5	Geol....2	Civil Gov....3
	11½	Chem. 3, Bot. 2....5	Chem. 3, Bot. 2....5	Chemistry....3	Chemistry....3	English....5
	2			Field Practice....4	Draw. and Shop-work....4	
					Phys. Lab....2	
THIRD YEAR.		*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*
	8½	Psychol. 2 Geol. 2....5	Psychol. 3, Geol. 2....5	Psychology....3	Psychology....3	Psychol. 3, Geol. 2....5
	9½	Zoology....3	Zool. 3 Struc. Bot. 2....5	Anal. Chem....5	Anal. Chem....2	Surveying....4
	10½	Eng. Literature (Elect.)....2		Rational Mechan....4	Rational Mechan....5	Eng. Lit. 2, & Agric. 2....4
	11½	Lat. and Greek, or German....5	German....5	Astronomy....2	German....5	Phys. Geog....2
	3	Anglo Saxon, (Elect.)....2		Field Practice....4	Shop-work....3	
				Mech. Drawing....2	Mech. Drawing....2	
		Winter Term.	*Winter Term.*	*Winter Term.*	*Winter Term.*	*Winter Term.*
	8½	Logic 3, Geol. 2....5	Logic 3, Geol. 2....5	Logic....3	Logic....3	Logic 3, Geol. 2....5
	9½	Zoology....3	Zool. 3, Struc. Bot. 2....5	Anal. Chem....5	Anal. Chem....2	History....2
	10½	Eng. Literature, (Elect.)....2		Rational Mech....4	Rational Mechanics....4	Eng. Lit. 2, Agric 2....4
	11½	Lat. and Greek, or German....5	German....5	Mineral 2, Astron....4	German....5	Phys. Geog. 2, Stock Feed 2....4
	2	Anglo Saxon (Elect.)....2		Mech. Drawing....2	Shop-work....3	
					Mech Drawing....2	
		Spring Term.	*Spring Term.*	*Spring Term.*	*Spring Term.*	*Spring Term.*
	8½	Ethics 3, Geol. 2....5	Ethics 3, Geol 2....5	Ethics....3	Ethics....3	Ethics 3, Geol 2....5
	9½	Phys. & Hygiene....2	Phys. & Hygiene....5	Anal. Chem....5	Anal. Chem....2	History....2
	10½	Eng. Literature, (Elect.)....2		Applied Mech....4	Applied Mech....5	Eng. Lit. 2, Agric. 2....4
	11½	Lat. and Greek, or German....5	German....5	Astron 2, Architect 3....5	German....5	Phys. Geog. 2, Farm App. 2....4
	2	Anglo Saxon, (Elect.)....1		Mech. Drawing....4	Shop-work....3	
					Mech. Drawing....2	
FOURTH YEAR.		*Fall Term.*	*Fall Term.*	*Fall Term.*	*Fall Term.*	
	8½	Elective....	German 3....3	Roofs & Bridges....4	Des. Machinery....2	
	9½	Elective....	Elective....	Stereotomy....2	Journal Meeting....1	
	10½	Elective....	Elective....	Railroads....4	Thermodynam....4	
	11½	Metaphysics....3	Elective....	Mining....3	Mach. and Power....5	
	2			Field Practice....	Shop-work....4	
		Winter Term.	*Winter Term.*	*Winter Term.*	*Winter Term.*	
	8½	Elective....	German 3....3	Metal. 2, Geodesy 3....5	Des. Machinery....2	
	9½	Elective....	Elective....	Hydraulics....4	Hydraulics....4	
	10½	Elective....	Elective....	Steam Engine....4	Steam Engine....4	
	11½	Metaphysics....3	Elective....	Materials of Engin....4	Materials of Engin. 3	
	2			Original Work....	Design and Laboratory....5	
		Spring Term.	*Spring Term.*	*Spring Term.*	*Spring Term.*	
	8½	Elective....	German 3....3	Railroads....3	Specifications....1	
	9½	Elective....	Elective....	Phys. and Hygiene....5	Phys. and Hygiene....5	
	10½	Elective....	Elective....	Specifications....	R. R. Econ....3	
	11½	Metaphysics 3....3	Elective....	Field Practice....4	Law of Contracts....	
	11½			Thesis....	Thesis and Drawing....	

Catalogue of W & L
1893-97.

UNIVERSITY CALENDAR.

The University year consists of three terms, beginning for the ar 1894–5, respectively, as follows: The Fall term, Wednesday, ptember 12th, 1894; Winter term, Wednesday, January 2nd, 1895; ring term, Wednesday, April 3rd, 1895.

1894.

ne 1–9th—Final Examinations.

ne 10th—Sunday, 11 A. M., Baccalaureate Sermon, by Rt. Rev. C. C. Penick, D. D., Baltimore.

ne 11th—Monday, 8 P. M., Regents' Prize Declamation.

ne 12th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

ne 13th—Wednesday, 10 A. M., Annual Commencement.

Vacation.

eptember 11th—Tuesday. Entrance Examinations.

eptember 12th—Wednesday, 8:15 A. M., Fall Term begins.

November 28th—Wednesday, 1 P. M., Thanksgiving Recess begins.

December 3rd—Monday, 8:15 A. M., Exercises resumed.

December 14–21st—Fall Term examinations. Vacation of two weeks.

1895.

January 2nd—Wednesday, 8:15 A. M., Winter Term begins.

February 22nd—Friday, Washington's Birthday—Holiday.

March 16–26th—Winter Term Examinations. Recess of one week.

April 3rd—Wednesday, 8:15 A. M., Spring Term begins.

June 1–8th—Final Examinations.

June 12th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.	Term Expir
1.	J. B. SOMMERVILLE	Wheeling	189
2.	CLARENCE L. SMITH	Fairmont	189
3.	JOHN BASSEL	Clarksburg	189
4.	J. SCOTT WITHERS	Glenville	189
5.	J. M. HOLSWADE	Spencer	189
6.	JAS. H. STEWART	Raymond City	189
7.	WIRT A. FRENCH	Princeton	189
8.	M. J. KESTER	Union	189
9.	JAS. F. BROWN	Charleston	189
10.	T. J. FARNSWORTH	Buckhannon	189
11.	JOSEPH MORELAND	Morgantown	189
12.	JOHN A. ROBINSON	Patterson's Depot	189
13.	W. W. BROWN	Kabletown	189

Officers of the Board.

JOHN A. ROBINSON, PRESIDENT,
JOHN I. HARVEY, TREASURER,
S. B. BROWN, SECRETARY,
JOHN A. MYERS, SUP'T GROUNDS AND BUILDINGS.

Executive Committee.

JOHN A. ROBINSON, CHAIRMAN,
JOHN BASSEL,
C. L. SMITH,
T. J. FARNSWORTH,
JOSEPH MORELAND.

Experiment Station Committee.

JOHN A. ROBINSON, CHAIRMAN,
J. B. SOMMERVILLE,
C. L. SMITH,
J. S. WITHERS,
W. W. BROWN.

FACULTY.

.....President.
Professor of Political Science.

P. B. REYNOLDS, D. D., Acting President.
Professor of Metaphysics and English.

JOHN I. HARVEY, A. M., Ph. D.,
Professor of Modern Languages.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

WILLIAM P. WILLEY, A. M.,
Professor of Equity and Jurisprudence.

A. R. WHITEHILL, Ph. D.,
Professor of Chemistry and Physics

J. W. HARTIGAN, A. M., M. D., F. S. S., F. R. M. S.,
Professor of Biology.

.....
Professor of Civil and Mining Engineering.

JOHN L. JOHNSTON, C. E.,
Professor of Applied Mathematics and Drawing, and Acting Professor of Civil and Mining Engineering.

First Lieutenant F. DeW. RAMSEY, 14th Inf., U. S. A.,
Professor of Military Science and Tactics.

S. B. BROWN, A. M.,
Professor of Biology.

JOHN A. MYERS, Ph. D.,
Director of the Experiment Station.

B. C. ALDERSON, A. M.,
Professor of Ancient Languages.

R. A. ARMSTRONG, A. M.,
Professor of Mathematics.

THOS. C. MILLER, A. M.,
Professor of Pedagogy and Principal of the Preparatory Departmen

F. WM. RANE, B. AGR., M. S.,
Professor of Agriculture and Horticulture.

WM. S. ALDRICH, M. E.,
Professor of Mechanical Engineering and Director of the Dep't of Mechanic Arts.

WAYLAND F. REYNOLDS, A. M.,
Assistant in Metaphpsics and English.

A. J. HARE, A. B.,
Assistant in Ancient Languages, English and Mathematics

CLARA HOUGH,
Librarian.

AGRICULTURAL EXPERIMENT STATION.

Official Staff.

JOHN A. MYERS, PH. D. ..... Director.

D. D. JOHNSON, A. M.* ..... Agriculturist.

R. J. J. DEROODE, PH. D. ..... Chemist.

A. D. HOPKINS ..... Entomologist.

F. W. RANE, B. Agr., M. S. ..... Horticulturist and Microscopist.

SUSIE V. MAYERS ..... Stenographer and Book-Keeper.

*Deceased.

THE UNIVERSITY.

Origin.

The West Virginia University was established by act of the Legislature, February 2, 1867. It was called "The West Virginia Agricultural College". The proceeds of the States's share of the "Public Land Script," donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each state of an Agricultural College, were given to the College, and constitute a part of the endowment fund. By subsequent act of the Legislature, the name of the institution was changed to "West Virginia University", and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of the work.

Location

The location of University is pleasant, beautiful and accessible. The community is thrifty, moral and cultivated—as much so as that of any other town of the same size in this or any other State. There are no saloons. The town has the advantages of water works—pure, soft, mountain water—natural gas and electric lights. Morgantown is on the Fairmont, Morgantown and Pittsburg Railroad, connecting it southward at Fairmont and Grafton with all railroad lines running through the State, and northward with Pennsylvania routes. Daily packets run from Pittsburg to Morgantown on the Monongahela river.

"PLANT."

1. Grounds.

The University grounds, about eighteen acres in extent, occ an elevated and healthful position overlooking the Monongali river, and command a beautiful view of the surrounding count They afford a well improved campus, sites and surroundings for various buildings, grounds for the military drill and out-door a letics, drives, groves, &c.

2. Buildings.

The principal buildings are six in number, all of brick, and fo of them new. They are admirably adapted to their purposes, a have cost, with their equipment, more than $250,000. They are t following:

(1). Two large buildings, of three stories and a basement each, f class rooms, Library, Biological Department, Museum, Society Hall Offices, &c.

(2). A Scientific Building, finished and equipped in the summ of 1893, affording lecture rooms, laboratories, &c., for the depar ments of Chemistry and Physics, Geology, Civil Engineering an Art.

(3). A Mechanical Hall, affording shops, machinery, appliances &c., for instruction in Mechanical Engineering and the Mechani Arts. An addition is to be made to this building this year that wil double its capacity.

(4). An Auditorium, furnishing room for a commodious and beau tiful Chapel and Commencement Hall, an Armory and Drill Hal and a Gymnasium.

(5) An Agricultural Experiment Station, which, although not a part of the University proper, forms, with its libraries, laboratories, and other equipments, an invaluable adjunct to the University. This building has just been remodelled and doubled in extent, and is one of the handsomest and best equipped Experiment Stations in the United States.

3. Equipment.

The Apparatus for instruction in Civil and Mining and Mechanical Engineering, Chemistry and Physics, Biology and Geology, is mostly entirely new, has been made to order, and is pronounced by experts to be equal to the best in the country. The Apparatus for the various other departments is being constantly increased and improved.

The Library contains standard works in all departments of literature, books of reference needed in all branches of work in the University, and a Reading Room furnished with the best papers and magazines. Large additions are made to the Library every year.

A Gymnasium has been fitted up with the best modern appliances, s under the management of a competent director, and is amply pro-ided with all the facilities for exercise and physical development.

The Experiment Station has no organic connection with the Uni-ersity, but its able director and staff, its equipment, its chemical, botanical, entomological, horticultural and agricultural work and experiments should be reckoned among the facilities for education at the University.

Funds for maintaining the University are derived from the inter-est on an endowment of about $110,000; from biennial appropria-tions made by the State Legislature, and from the "Morrill Fund," appropriated by act of Congress of August 30, 1890, for the further endowment of Agricultural Colleges, from which the University re-ceives this year, after deducting the amount that goes to the support of the State Institute for colored youth, the sum of $16,000, and which will yield $20,000 per year for University support in four more years.

Admission

In order to be admitted to any course in the Collegiate Department, the candidate must stand a satisfactory examination in the studies preparatory to such course, or otherwise give sufficient evidence of the necessary proficiency in them.

Graduates of the Academic Department of the Normal School or any of its branches, or from approved High Schools and Academies, are admitted to Cellegiate courses without examination, upon pre-sentation of a proper certificate of such graduation.

Students who wish to take "advanced standing" in college courses upon credit for work done elsewhere, must apply to the Faculty for permission to take such standing, and then must satisfy the pro-fessors in whose course they wish credit given, by examination or otherwise, that they have done the work required in these courses or a full equivalent therefor.

To matriculate, a candidate must get from the President a written permit to enter; must be admitted to the required number of classes and have the certificate of professors that he is so admitted; must have the Treasurer's receipt for the payment of all dues and must be enrolled by the Secretary.

Matriculation is equivalent to a pledge to obey the rules and regu-lations of the University, and it will be so construed and the matric-ulate required to fulfill it.

At the beginning of each term, the student must obtain the Treasurer's receipt for all fees payable that term, and be enrolled by the Secretary for that term, before he will be allowed to go on with his studies.

Students must enroll immediately upon their arrival at the Uni-versity, and re-enroll promptly at the beginning of the terms, or give a satisfactory excuse for the delay.

Female students are admitted to the collegiate department under the same regulations as male students.

REQUIREMENTS.

1. Work.

Students must select their studies so as to have not fewer than fourteen and not more than sixteen recitations per week, unless they have special permission to take a smaller or a larger amount of work.

Students must enter one of the regular courses, unless they are permitted for good reasons to take an irregular or special course.

Students must pursue the courses they have entered and remain in the classes in which they have been enrolled, until they are permitted by the Faculty to change or abandon their work.

2. Grades.

In order to be promoted from a lower to a higher class, or to get credit for having completed any subject in any course, students must make an average of 7 on a scale of 10 for each term given to the subject.

Grades are made up by an average of recitation and examination values, each counting one-half.

Examinations are held at the close of each term, and at such other times as professors may deem necessary. The time allowed for each examination is not less than three nor more than five hours. Upon failure to pass, a second examination will be granted only by special permission of the Faculty. Absence from examination will be excused only when proof is given that such absence is unavoidable. In case of an excused absence from examination, if the recitation value equals 8.50, the student will not be required to stand an examination.

All absences, from whatever cause, are counted against the student in making up his grade, except that he may be excused for absences in any class equal to one-tenth the exercises of that class for a term, upon presenting to the Faculty a sufficient reason for the absences, and making up the work done by the class while he was absent.

3. Discipline.

The rules and regulations which students are required to observe are few, simple and reasonable. Punctuality and regularity in attendance upon all required exercises, reasonable diligence in the performance of the work prescribed, abstinence from drinking, gambling

l like gross vices, and civil, orderly conduct generally, are deemed ficient, and are all that will be exacted. Students who cannot, or ll not, comply with these requirements will not be allowed to re-in in the University. Offenders will be warned, and will be given asonable time to correct their conduct, and then, if they do not end, they will be dismissed.

Religious Worship.

The daily work of the University is begun by short, appropriate ligious exercises in the Chapel, upon which every student, unless ecially excused, is required to attend. Students, unless excused, e also required to attend some Church at least once on the Sabbath. he different denominations have their churches, pastors and Sunday chools in the town, and these are means of good influence over the tudents. Students of age, and minors through their parents or uardians, are exempted from the above requirements, when they an give reasonable evidence that such requirements are against their onscientious convictions.

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University departments, who shall write the best essay on a subject selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. The manuscript of each competitor shall be in his own handwriting.
2. Each essay shall have a fictitious signature, and be accompanied by a sealed letter containing both the fictitious and real name of the writer.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length
4. The successful competitor shall read his essay in public at such time as the Faculty may direct.

The Regents' Prize for Declamation will be presented to any student whose studies are principally in the Preparatory Department, for the best declamation. The award is made by a committee appointed by the President of the Board of Regents.

AUXILIARIES.

1. Library and Reading Room.

Students will find great advantage in using as extensively as possible the Library and Reading room. These are open every day in the week during University hours—8:30 to 12:00, and 2:00 to 5:00—and are free to all students who comply with the regulations. These regulations are posted in the Library and can be obtained of the Librarian.

2. Literary Societies.

There are, in connection with the University, two flourishing literary societies, the Parthenon and the Columbian, Each has a good hall handsomely furnished. The exercises in these societies, consisting of composition, readings, declamations, orations, debates and criticism, are invaluable to students. These societies have an annual contest, at some time in Commencement week, in declamation, essay, oration and debate, for prizes aggregating $100. Students are urged to connect themselves with one of these societies, and to perform faithfully all the work required of the members.

3. Engineering Society.

The object of this society is to encourage the investigation of, and facilitate an acquaintance with and mastery of, engineering topics. Its exercises, consisting of essays, discussions, original researches, etc., are of great value to students pursuing a course in engineering.

4. Y. M. C. A.

The Young Men's Christian Association is doing, successfully, an important work. It is in a flourishing condition and is very active. The Faculty recognize its great service in maintaining the discipline and a high standard of character in the University. It meets every Friday evening, from 6 to 7 o'clock, for devotional exercises and business. Students who are seeking the highest culture for themselves, should connect themselves with this association and engage actively in all its work.

EXPENSES.

1. Tuition

Tuition is free to West Virginia students in all departments. Students from other States are charged $12.50 per term in University Departments, and $5.00 per term in the Preparatory Department.

2. Fees.

The matriculation fee is $5 00. payable upon entering the University. It is paid but once. The contingent fee for each term is $2.00, payable at the beginning of the term. State Cadets are exempted from these fees. The other fees are a laboratory fee of $2.00 for students in general chemistry; a fee of $5.00 for students in special anatomy, to cover cost of material used; a fee of $20.00 for students in analytical chemistry, to cover cost of materials, and a fee of $5.00 for a diploma upon graduation.

3. Board and Lodging.

Furnished rooms cost each student from 75 cents to $1.25 per week. The average is $1.00 per week. Students lodge with private families. Board, in students' clubs cost from $1.75 to $2.00 per week; in private families, from $2.00 to $3.00 per week.

4. Incidentals.

Lights, washing, text-books and incidentals cannot be correctly estimated, but will cost as little as at any other school of the same grade. State Cadets get their text-books and stationery free. Washing costs about $1.00 per month. The cost of incidentals depends largely upon the tastes and habits of the student.

5. Estimate.

Room rent	$27.00	to	$45.00
Board	63.00	"	90.00
Washing	9.00	"	13.00
Incidentals	20.00	"	20.00
Text-Books	8.00	"	30.00
Contingent fees	6.00	"	6.00
	$137.00	to	$204.00

To this must be added matriculation and tuition fees, in case they are required, traveling expenses, clothing, etc., etc.

Text-books are kept for sale at the University, and are furnished to students at cost.

ORGANIZATION.

The University is organized for instruction so as to comprise eight Academic Schools, five Technical and Professional Schools and four Special Courses. A synopsis of the work in these several schools and courses is given here. For a complete and detailed description, see the announcements of the several professors in another place.

I ACADEMIC SCHOOLS.

I English.

Preparatory.—Grammar, Composition and Elements of Rhetoric.
1. Elementary Rhetoric, Composition and Introduction to English Literature.
2. History and growth of the English Language and Literature.
3. Advanced Rhetoric and Rhetorical Analysis.
4. Literature and Literary Criticism.
5. Anglo-Saxon and English Philology.

II. Mathematics.

Preparatory—Arithmetic, Elementary Algebra and Geometry.
1. Algebra, Geometry, Trigonometry and Analytical Geometry.
2. Calculus and Analytical Geometry.
3. Astronomy.

III. Ancient Languages.

Preparatory—Latin Grammar, Exercises and Reader.
1. Latin and Greek Grammar Exercises and Reading.
2. A more advanced course in Latin and Greek Grammar, Exercises and Authors.
3. Special course in Latin and Literarure and Philology.

IV. Modern Languages.

1. French and German Grammar Exercises and Reading.
2. Advanced French and German Grammar, Exercises and Reading.
3. French and German Literature.

V. Chemistry and Physics.

1. General Chemistry and Physics.
2. Analytical Chemistry and Practical Physics.

VI. Blology.

1. Anatomy, Physiology and Field Botany.
2. Zoology and Structural Botany.
3. Advanced Human Anatomy.
4. Microscopy.

VII. Geology

1. General, Stratagrapic and Economic Geology.
2. Mineralogy and Lithology.
3. Physical Geography.
4. Advanced Economic Geology.

VIII. Metaphysics and Political Science.

1. Elementary Psychology, Logic and Political Economy.
2. Advanced Psychology, Logic and Principles of Science and Ethics.
3. History and Political Science.
4. Advanced Political Economy.

2. Technical and Professsonal Schools.

I. Civil and Mining Engineering.
II. Mechanical Engineering and Mechanic Arts.
III. Agriculture and Horticulture.
IV. Law.
V. Military Science and Tactics.

3. Special Courses.

I. Book-keeping and Commercial Law.
II. Pedagogics.
III. Anatomy.
IV. Physical Culture.

NOTE.—Credit will be given in the regular courses for these courses, except Physical Culture, when taken where electives are allowed.

Courses for Degrees.

The University offers six regular courses for degrees, as follows:

1. Bachelor of Arts.
2. Bachelor of Science.
3. Bachelor of Science in Civil Engineering.
4. Bachelor of Science in Mechanical Engineering.
5. Bachelor of Science in Agriculture.
6. Bachelor of Laws.

Students are admitted to any of these courses who have finished the required preparatory work, and who show that they are competent to pursue the studies included in the course. See detailed announcement of Preparatory Department for preparatory work in each course.

1. Bachelor of Arts.

This is a four years' course. It is devoted especially to English, Ancient Languages, Literature and Philosophy, with a fair proportion of Mathematics and Sciences, and room enough for electives to adapt it to the tastes and wants of the student.

1st year: 1 Eng. 2 hours, 1 Math. 3 hours, 1 Anc. Lang. 5 hours. 1 Chem. and Phys. 5 hours.

2nd year: 2 Eng. 3 hours, 2 Anc. Lang. 5 hours, 1 M. & P. Science, 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours.

3rd year: 3 Anc. Lang. 5 hours, 2 M. & P. Science 2 hours, 3 & 4 Eng. 5 hours, 2 Biol. 3 hours.

4th year: Special Anc. Lang. 3 hrs., 3 and 4 M. and P. Science, 5 hrs. Electives, 6 to 8 hrs.

The preparatory work required for this course includes Eng. 5 hrs. Math. 5 hrs., Latin 5 hrs. for each year.

2. Bachelor of Science.

This is a four years' course. It is devoted especially to the Sciences, Mathematics and Modern Languages, with a fair proportion of English and electives.

1st year: 1 Eng. 2 hrs., 1 Math. 5 hrs., 1 Fr. 3 hrs., 1 Chem. and Phys. 5 hrs.

2nd year: 2 Fr. 3 hours, 1 M. and P. Science, 3 hours. 1 Biology 2 hours, 1 Geol. 3 hours, An. Chem. 2 hours, 2 Math. 3 hours.

3rd year: 3 Fr. and 1 Ger. 5 hours, 2 M. and P. Science 2 hours, 2 Biology 3 hours, 2 Geolgy 2 hours, Prac. Phys. 2 hours Elective 2 hours.

4th year: 3 Ger. 2 hours, 3 and 4 M. and P. Science 5 hours, Electives 7 to 9 hours.

The preparatory work required for this course includes Eng. 5 hours, Math. 5 hours, Latin 5 hours for each year.

3. Bachelor of Science in Civil Engineering.

This is a four years' course, devoted to the subjects of Civil and Mining Engineering, with a collateral course in English, Mathematics, Modern Languages and Sciences.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, 1 Fr. 3 hours, 1 Chem and Phys. 5 hours, Drawing, etc. 2 hours.
2nd Year: 2 Math. 3 hours, 2 Fr. 3 hours, 1 M. and P. Sci. 3 hours, An. Chem. and Prac. Phys. 4 hours, C. E. work.
3rd year: 1 Ger. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, C. E. work.
4th year: 3 Math. 2 hours, 2 Geol. 2 hours, 2 Ger. 3 hours, C. E. work.

The preparatory work for this course includes Eng. 5 hours, Math. 5 hours; with drawing, etc., as assigned by the professor, for each year, 5 hours. A thesis is required for graduation.

4. Bachelor of Science in Mechanical Engineering.

This is a four years' course, devoted to the subjects of Mechanical and Electrical Engineering and Mechanic Arts, with a collateral course in English, Mathematics, Modern Languages and Sciences.

1st year: 1 Eng 2 hours, 1 Math. 5 hours, 1 Fr. 3 hours, 1 Chem. & Phys. 5 hours, Drawing, &c., 2 hours.
2nd year: 2 Math. 3 hours, 2 Fr. 3 hours, 1 M. & P. Sci. 3 hours, An. Chem. & Prac. Phys. 4 hours, M. E. work.
3rd year: 1 Ger. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, M. E. work.
4th year: 3 Math. 2 hours, 2 Geol. 2 hours, 2 Ger. 3 hours, M. E. work.

The preparatory work for this course includes Eng. 5 hours, Math. 5 hours, with Drawing, Shop Work, &c., as assigned by the Professor, 5 hours.

A thesis is required for graduation.

5 Bachelor of Science in Agriculture.

This is a four years' course, devoted to the subject of Agriculture, Horticulture, &c., with a collateral course in English, Mathematics and Sciences.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, B. K. 3 hours, 1 Chem. & Phys. 5 hours, Drawing, &c., 2 hours.
2nd year: 2 Eng. 3 hours, 1 M. & P. Sci. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, An. Chem. 2 hours, Ag. & Hort.
3rd year: 2 Biol. 3 hours, 2 Geol. 2 hours, Prac. Phys. 2 hours, Ag. & Hort.
4th year: 3 & 4 M. & P. Science 5 hours, Elect. 5 hours, Ag. & Hort.

The preparatory work for this course includes Eng. 5 hour Math. 5 hours, with practical work as assigned by the Professor, f each year 5 hours.

6. Bachelor of Laws.

This is a two years' course, but a student with the requisite abilit and industry may complete it in one year. It is devoted to suc subjects as will prepare students for the successful practice of law.

Junior: Blackstone, Rights of Persons, Rights of Things, Torts Criminal Law, Statute Law, Constitutional Law, Contracts Agency, Evidence, Sales.

Senior: Common Law Pleading, Real Property, Negotiable Paper Partnership, Suretyship and Guaranty, Evidence, Equity Pleading and Practice, Bailments, Insurance, Corporations, Practice in the Courts.

For full information as to the preparatory work required for these several courses, consult the detailed announcement of the Preparatory Department in another place.

Students are advised, and expected, to take one of the regular courses. They will save time, and get more benefit by doing so, even if they do not finish the course.

Students who cannot take a regular course may, for good reasons, make up an irregular or special course of 15 hours per week from such subjects as do not conflict.

Students who cannot take the regular course in C. E., M. E., or Agr., may, if prepared, enter one of these courses, and get a certificate showing the work done.

German may be substituted for Greek, where there is no conflict.

Students who have not fully completed the preparatory work may, however, enter a course by taking the preparatory work not finished and such part of the course as they may be qualified to pursue.

Post Graduate Courses.

A course of one year is given for each of the degrees of Master of Arts and Master of Science to students who have finished the B. A. and B. S. courses, respectively, upon application to the Faculty.

COURSES OF INSTRUCTION.

I. ACADEMIC SCHOOLS.

English.

ASSISTANT PROFESSOR REYNOLDS.

1.—ELEMENTS OF RHETORIC AND COMPOSITION.

Two hours a week throughout the year are given to this course. The object is mastery of the elementary principles of Rhetoric and proficiency in English composition. The fall and winter terms are given to text-book study, recitations and exercises. The Spring term is given to original exercises and essay writing.

2.—HISTORY AND GROWTH OF THE ENGLISH LANGUAGE AND LITERATURE.

Three hours per week throughout the year are given to this course. The origin, elements, development and changes of the English language are studied, together with the growth and characteristics of English literature, and an introduction to English prose and poetry. Text-books: Lounsbury's History of the English Language, Trench on Words, Minto's English Prose, Home Pictures of English Poets.

PROFESSOR REYNOLDS.

3.—RHETORIC.

Two hours a week throughout the year are given to this course. It is devoted to the study of the higher principles of rhetoric and the analysis of the higher forms of English composition. Practical work in invention and the development of themes accompanies the text-book study and lectures. Text-books: Genung's Rhetoric and Rhetorical Analysis.

4.—LITERATURE AND LITERARY CRITICISM.

Three hours a week throughout the year are given to this course. The principles of literary criticism are studied, and works of repre-

sentative authors in English prose and poetry are read, discus and criticised. Critiques upon the works read are written by class.

5.—ANGLO-SAXON AND ENGLISH PHILOLOGY.

An elective course of two hours a week throughout the year these subjects is given to students who wish to acquaint themsel with the original sources of the English language.

Mathematics.

PROF. ARMSTRONG.

1. (A)—UNIVERSITY ALGEBRA, SOLID GEOMETRY, TRIGONOMETR ANALYTIC GEOOMETRY.

Five hours a week throughout the year.

Fall Term.—Well's University Algebra, beginning at Log rithms, completed. (6 weeks.)

Well's Solid Geometry, completed. (8 weeks.)

Winter Term.—Trigonometry—Wentworth.

Spring Term.—Analytic Geometry—Nichols.

(B)—UNIVERSITY ALGEBRA, SOLID GEOMETRY, TRIGONOMETRY.

Three hours a week throughout the year.

Fall Term.—University Algebra and Geometry.

Winter Term.—Well's Solid Geometry.

Spring Term.—Trigonometry—Wentworth.

Before being admitted to course, (1) students will be required t pass examinations on Plane Geometry, and University Algebra t Logarithms or Theory of Equations, or to present satisfactory certifi cates of proficiency on these subjects.

Course (A) is for students taking the B. S., C. E., and M. E Courses.

Course (B) is required of all students for the degree of A. B.

2.—ANALYTIC GEOMETRY AND CALCULUS.

Three hours a week throughout the year.

Fall Term.—Solid Analytic Geometry and Calculus. (Taylor.)

Winter Term.—Differential Calculus—Curve Tracing.

Spring Term.—Integral Calculus—Rectification of Curves.

Students are required to complete Course 1 before entering upon course 3.

3.—ASTRONMY, DESCRIPTIVE AND MATHEMATICAL.

Two hours a week, Fall and Winter Terms.

Ancient Languages.

PROF. ALDERSON.

The following courses were offered during the year 1893–4, and will be repeated, without material changes, during the coming year:

LATIN.
Fall Term—Virgil's Eclogues and Georgics. Two hours a week.
Winter Term—Horace's Odes. Three hours a week.
Spring Term—Catullus. Two hours a week.

LATIN.
Fall Term—Livy. Two hours a week.
Winter Term—Horace's Satires and Epistles. Three hours a week.
Spring Term—Seneca's Letters. Two hours a week.

LATIN.—*Two hours a week.*
Early Latin and Latin Inscriptions.

GREEK.
Fall Term—Herodotus. Three hours a week.
Winter Term—Homer's Iliad. Two hours a week.
Spring Term—Homer's Odyssey. Three hours a week.

GREEK.
Fall Term—Xenophon's Memorabilia. Three hours a week.
Winter Term—Plato's Apology and and Crito. Two hours a week.
Spring Term—Aristophanes' Clouds. Three hours a week.

GREEK.—*Two hours a week.*
Greek tragedy: Sophocles, Euripides and Æschylus.

In Latin 1 and Greek 4 a parallel course in prose composition is given, reciting once a week throughout the year. The literature of each language is taught by frequent reference to the authors, and special study of the great writers. Greek and Roman architecture, mythology, biography and daily life are taught and illustrated by an exhaustive series of stereopticon views.

To students who have completed Latin 3 and Greek 6, and to special students who are prepared, additional courses will be offered as follows: In Latin, Quintilian, Tacitus, Juvenal and Martial; in Greek, Demosthenes, Thucydides, Pindar and New Testament, Greek.

Modern Languages.

PROF. HARVEY.

COURSE 1. FRENCH.—Three times a week.
Grammar and Easy Readings throughout the year.

COURSE 2. FRENCH.—Three times a week.
Selections from Modern Authors; Grammar and Exercises throughout the year.

COURSE 3. FRENCH.—Two times a week.
Selections from Classic Authors. Composition and Literature throughout the year.

COURSE 4. GERMAN.—Three times a week.
Grammar and Easy Readings throughout the year.

COURSE 5. GERMAN.—Three times a week.
Selections from Modern Authors. Grammar and Exercises throughout the year.

COURSE 6. GERMAN.—Two times a week.
Selections from Classic Authors. Composition and Literature throughout the year.

REMARKS.—As some language-training is pre-supposed, the student is advised to familiarize himself at least with the elements of Latin before applying for admission to any of the courses in this school.

In courses 1 & 4, the student is drilled in the accidence of Grammar, and in 2 & 5 in Syntax, in addition to the careful translation into English of the Authors selected. In courses 3 & 6, in addition to the class-room work, a parallel course in Reading will be prescribed at the beginning of each term and required on examination.

The object of the whole course is to lay a broad foundation for a practical working knowledge of the languages taught. Instruction is given by recitations on approved text-books by familiar conversations.

Chemistry and Physics.

PROF. WHITEHILL.

1.—PHYSICS. Three hours.

The leading principles of Mechanics are studied during the Fall term. During the Winter term Magnetism, Electricity and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. To enter this course the student must have a knowledge of Arithmetic, Algebra and at least three books of Plane Geometry. During the year fully one-half of the time devoted to the subject is taken up with experimental work, and this work is intended to develop not only the essential facts of Physics, but also the value of the scientific method as a discipline.

2.—ADVANCED PHYSICS. Two exercises.

This course is open to students who have taken the course of General Physics in the University, and who have sufficient Mathematical knowledge for the discussion and investigation of problems in higher Physics. In connection with the theoretical work, practical work is undertaken in dynamics, sound, heat and light, and the elements of electrical engineering receive attention.

3.—GENERAL CHEMISTRY. Three hours.

The subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, proper-

es and relations of chemical elements and compounds, and the octrines of chemical philosophy. Throughout the course, allusion made to the applications of Chemistry in medicine, pharmacy and e arts, and chemical problems are from time to time proposed for olution to fix in mind the principles, and to suggest the general ethods of turning chemical knowledge to practical account. Inrganic Chemistry, and Chemical Philosophy are studied during the all and Winter terms, and Organic Chemistry during the Spring erm.

A knowledge of the branches required for entrance into the first years' course in physics is also necessary for the successful completion of this course in Chemistry.

4.—Analytical Chemistry. Five hours.

Facilities are provided for systematic instruction in qualitative analysis and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals and are required to spend from one to two hours daily in the laboratory. This course includes the preparation of some of the more important gases and salts and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work.

During the Spring term an elementary course in quantative analysis is given, and special attention is directed to some of the more important medical preparations and to the analysis of water, coal and coke.

Students who have completed the course of General Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in any elementary work on the subject named.

Apparatus.

Students in the several classes have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Atwood's Machine, Pelton's water motor, 4 Troemer balances, Jolly balance, Brush dynamo, 2 Ruhmkorff coils, Holtz and plate electrical machines, with accessories, Leyden and galvanic batteries, electrical testing set, resistance coil, ampere and volt metres, galvanometers, Perret electric motors, Geissler, Crookes and Plucker tubes, telegraphic instruments, telephone, microscope, 2 spectroscopes, polariscope, colorimeter, heliostat, 2 air pumps with accessories, siren sonometer, manometric flame apparatus, radiometer, optical lantern, plane, convex and concave mirrors, graphoscope, kaleidoscope, stereoscope, meteorological instruments, apparatus for electroplating and gas analysis, combustion fur-

naces, photographer's outfit, models, levers, planes, pulleys, pendulums, etc.

The method of instruction in this department is by text-books, lectures and experiments. In every course the theoretical work is supplemented by practical work in the laboratory.

During the present year the facilities for instruction in both Chemistry and Physics have been largely increased by the completion of the Scientific building, which is one of the most complete buildings of its kind in the country.

Biology.

PROFESSOR HARTIGAN.

1. FIELD BOTANY.

This class meets once a week throughout the year. The Fall and Winter terms are devoted to the study of the text, which is expanded by lectures from time to time, while the Spring term is given to practical work in the analysis of flowers. Examinations are held at the end of each term, and in addition to the practical work in the class room and field, each student is required to prepare an herbarium of one hundred specimens. The text is Wood's Botanist and Florist. In analysis, Wood, and the Systems of Gray and Kellerman.

2. STRUCTURAL BOTANY.

One hour a week throughout the year is given to this subject. The Fall and Winter terms are given to the study of general plant Anatomy and Physiology; and the Winter term to the special consideration of these subjects, the student being instructed in the practical use of the microscope in the study of Plant Histology. Bessey's Structural Botany is the text used. For reference, Gray, Sachs, Crookshank's Bacteriology, Bentley, Cooke.

3. ZOOLOGY.

Two hours a week throughout the year are given to this subject. The Fall term is given to the study of Comparative Zoology. This part of the course is mainly by lectures. The Winter and Spring terms are devoted to the study of Systematic Zoology, Embryology, and Histology. Students are instructed in the use of the microscope, and are required to use it in their investigations each day in the class-room. Members of this class are required to skeletonize five vertebrate animals, as practical work. The text is Orton's Zoology, with the works of Darwin, Haeckel, Spencer, Packard and Claus, for reference.

4. PHYSIOLOGY AND HYGIENE.

One hour a week throughout the year is given to this subject, (co-ordinated with Course 1.) The course is entirely by lectures, no special work being used as a text, though any standard work is recommended for collateral reading. Books recommended for reading

: Flint's Human Physiology, Yeo's Manual, Kirke, Dalton. In ygiene—Huxley and Youmans, Wilson, Parks.

Human Anatomy.

Five hours a week throughout the year are given to this subject. he course is entirely by lectures, and is designed as a special course this branch for those desiring to prosecute the study of Medicine nd Surgery. The skeleton or cadaver will furnish the proper text r each lecture, though models, manikins, specimens and charts will e used when necessary to elucidate any special subject.

Students in this course are required to dissect three parts of the uman body and to be examined thereon. The dissecting room is pen each evening from 7 till 10 o'clock, and all members of the lass are required to be present. Keene's edition of Gray's Anatomy s the text used.

Note.—Special certificates in courses 4 and 5 are accepted by leading Medical Schools of the country, as an equivalent for the same subjects required by them for the degree of M. D., and all students entering these courses with a view to obtaining such certificates, must pass an examination in preparatory Latin and second year's English, and, if not prepared on entrance to take such emaminations, they will be required to pursue these studies during the year in connection with the above course.

6. Microscopy.

Two hours a week are given to this course. This course is elective. Instruction is given in Microscopical Technique, Vegetable and Animal Histology and Bacteriology. The principles of staining. Germ Culture, Methods of Analysis of air and water are studied as applied to Practical Hygiene. The course is by lectures and practical laboratory work.

Geology and Mineralogy.

PROF. BROWN.

1. General Geology.—Dynamical and Historical.

Three hours a week, Mondays, Wednesdays and Fridays, throughout the year.

This course is open to all students who have attained proficiency in Chemistry and Botany, and is required of all candidates for the degree of A. B.

Text-book, LeConte's Elements of Geology.

2. Mineralogy.

Two exercises a week, Tuesdays and Thursdays, throughout the year.

This course is open to all, but is required of Engineering students. The work will be mostly practical, and consist of minute examina-

tions of hand specimens of the various minerals and of blowpipe and acid tests of many of them. The facilities for this practical work are now excellent, as our collections are extensive and are well classified.

Text-book, Dana's Manual of Mineralogy.

3. ECONOMIC GEOLOGY.—Elective course.

Three hours a week, Mondays, Wednesdays and Fridays, throughout the year.

It is necessary to have completed course 1 before being admitted to course 3.

The first part of the course will be devoted to the geology of mining and agriculture; the second part will consist of the examination of rocks and rock-making materials with special reference to the qualities of our various building stones. Examination by microscope of thin sections of various rocks will be a frequent class exercise. Our equipment for this course is extensive, consisting of Ward's College collection of Rocks, Julien's Building Stones, and large additions made from the World's Fair collections of economic geology.

Text-books, Tarr's Economic Geology of the U. S. and Merrill's Stones for Buildings and Decorations.

4. PHYSICAL GEOGRAPHY.—Elective Course.

Two hours a week throughout the year.

In the Spring Term this subject will be taught principally by lectures upon the relation of Physical Geography to human history.

Excursions.

Local excursions, on Saturdays especially, will be made by the regular classes during the Fall and Spring Terms, and during the Spring vacation of each year, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivalled facilities for the study of all problems connected with this useful science, and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific course of the University, but is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

Metaphysics and Political Science.

ASSISTANT PROFESSOR REYNOLDS.

1. ELEMENTARY METAPHYSICS AND ECONOMICS.

Three hours a week throughout the year are given to this course, which includes Elementary Physiology, Deductive Logic, and Rudiments of Economics. Text-books: Hill's Psychology, Davis' Deductive Logic, Steele's Rudimentary Economics.

2. ADVANCED METAPHYSICS AND ETHICS.

Two hours a week throughout the year are given to this course, which includes studies in Psychology, Inductive Logic and Ethics. Text-books: James' Psychology, Fowler's Inductive Logic, Spencer's Principles of Ethics: Justice.

PROFESSOR REYNOLDS.

3. HISTORY AND SCIENCE OF GOVERNMENT.

Three hours a week throughout the year are given to this course. An outline of General History is first given. And then the different forms and functions of government are studied, and this is followed by a study of the U. S. Government. Text-books: Myers' General History, Bluntschli's Theory of the State, Fiske's Civil Government in the United States.

4. POLITICAL ECONOMY.

Two hours a week throughout the year are given to this course. It is devoted to the study of the principles of economics and their practical application, and the discussion of various industrial, financial and social problems and theories. Text-books: Walker's Political Economy, supplemented by lectures, discussions and original research.

Elective courses in Physiological, Comparative and Historical Psychology, Inductive Logic and Principles of Science, and Ethics and Science of Religion, will be given to students who wish to study these subjects.

II. TECHNICAL AND PROFESSIONAL SCHOOLS.

Civil Engineering.

PROFESSORS JOHNSTON AND ALDRICH.

The department of Civil and Mining Engineering was established by the Board of Regents of the University in 1888, and a course of study leading to the degree of Bachelor of Science in Civil Engineering was organized which went into operation the fall of that year. By the accumulation of a large amount of fine instruments and other apparatus, and an increase in the number of instructors, the course of study has been largely expanded and improved; and it is now believed to compare favorably with the course of engineering as taught in the leading technical schools of the country. It is not only a comprehensive course, giving a young man fine opportunities for acquiring a broad and liberal education in the mathematical, physical and natural sciences, but it is a practical course, and prepares a young man thoroughly for the duties of the profession. The course of study extends over a period of four years, and any person of good preparation and studious habits can easily complete the course in that time.

The degree conferred on students who satisfactorily complete the course is that of Bachelor of Science in Civil Engineering. No student can be entered as a candidate for a degree after the beginning of the fourth year, though deserving young men, who have neither the time nor the funds to complete the full course, will be allowed to take a partial course, provided that the program of the intended course has been submitted to, and confirmed by the faculty.

The term Civil Engineering is understood to include the various branches of Engineering, designated by the special names of Railroad, Bridge, Hydraulic and Mining Engineering. It may be suggested that Civil Engineers find employment in the line of the profession in the following specialties of Engineering practice :

The surveys location and construction of railways, tramways, elevated railroads, tunnels and acqueducts; the design and construction of girder, suspension and truss bridges, of towers, roofs, and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors; coast and geodetic surveys; the determination of latitude and longitude and the location of true meridians; the projection of maps; the construction of working drawings, plans

and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the selection and tests of the materials of engineering; the design and construction of metallurgical works; the surveys and construction of water works, imigration canals, levees, revetment and retaining walls.

In addition to the usual class room work, consisting of lectures, recitations and practical exercises in free hand, geometrical, topographical and mechanical drawing and laboratory practice, excursions are made to points in neighboring States in connection with the course in geology and metallurgy. Special tests of the tensile, compressive, transverse and torsional strength of iron, steel, aluminium, cements and mortars made by the members of each class.

Thesis.

Each candidate for a degree is required to prepare a thesis on some subject related to a branch of engineering or other department of science. The thesis must be either a design or review of some machine, or structure, or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. The Thesis, with its accompanying drawings, must be deposited in the library of the University for permanent preservation.

Apparatus, Instruments and Models.

The collection of apparatus and instruments for instruction in engineering is complete and modern, consisting of transits, engineer's levels, theodolites, surveyor's compass, aneroid barometers, plane table, solar compass, Fairbanks cement testing machine, sextant, clinometers, odometers, pedometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, a blue printing outfit, a complete set of U. S. weights and measures, and a very large collection of wood and plaster of paris models of the various orders of architecture, statuary, &c. This department is also supplied with a large Riehle Bros. testing machine of forty thousand pounds capacity.

Admission to the Course.

All candidates for admission to full standing in the first year must have satisfactorily completed the preparatory course of the University, or its equivalent, excepting Latin and Greek.

[NOTE.—The figures in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction" beginning on page 19, the description of that course will be found. Where a bracketed and italicised title follows the name of a study the de-

scription will be found under the bracketed title. The other figures indicate the number of exercises per week.]

Course.

1. FREE HAND DRAWING. Two times per week.
   Fall Term: Drawing from the model. Study of form and dimensions.
   Winter Term: Sketching proportion, grouping perspective, &c.
   Spring Term: Lettering, detail sketching, Isometric and perspective drawing, shading, &c.

2. SURVEYING. Four times per week.
   Fall Term: Land surveying, recitations and field work.
   GILLESPIE.

3. DESCRIPTIVE GEOMETRY. Four times per week.
   Winter Term: Principles relating to the point line, plane, cone, cylinder, double curved surfaces of revolution, intersection of planes and solids; their development, &c.
   FAUNCE, WARREN.

4. SURVEYING. Four times per week.
   Spring Term: Geodetic and Mine Surveying, Levelling, Topographical and Trigonometrical surveying, etc.
   GILLESPIE, MERRIMAN

5. INSTRUMENTAL DRAWING. Four hours per week.
   Winter Term: Plan drawing, applications of Descriptive Geometry.
   Spring Term: (For Mechanical course only). Detail working plans, machinery design.
   THORNE.

6. MECHANICS. Five times per week.
   Fall Term: Analytic Mechanics. BOWSER.
   Winter Term: Analytic Mechanics—Completed.
   Spring Term: Applied Mechanics. MERRIMAN.

7. RAILROAD LOCATION. Three times per week.
   Fall Term: Theory and Practice of Ry. Location, recitations, lectures and field work. SEARLES.

8. MECHANICAL DRAWING. Four hours per week.
   Fall Term: Plan drawing, mapping the survey, foundations, buildings, etc.
   Winter Term: Detail working plans, engineering construction.
   Spring Term: Detail working plans, machinery construction.

9. CIVIL ENGINEERING. Three times per week.
   Winter Term: General engineering construction, foundations, lines, mortars, cements, wood, stone and concrete, machinery, tunnelling, bridge construction, etc. MAHAN.

10. ARCHITECTURE. Three times per week.
Spring Term: Ancient and Modern Architecture studied and compared. Lectures and recitations. BULLOCH.

11. ROOFS AND BRIDGES. Five hours per week.
Fall Term—Strains and stresses in framed structures., &c. MERRIMAN.

12. STEREOTOMY. Three hours per week.
Fall Term—Stone cutting, masonry, construction, patterns, models, &c. WARREN.

13. MINING. Two hours per week.
Fall Term—Theory and practice of coal mining, shafting, hoisting, timbering, drainage, ventilation of mines, &c. IHLSENG.

14. HYDRAULICS. Five times per week.
Winter Term—Water power, flow through orifices, pipes and tubes, over weirs, drums, locks, &c., efficiency of water motors and water wheels. MERRIMAN.

15. METALLURGY. Three hours per week.
Spring Term—Metallurgy of iron and steel. GREENWOOD.

16. SPECIFICATIONS. Once a week.
Spring Term—Lectures and recitations. HAUPT.

17. RAILROAD ECONOMY. Three times per week.
Spring Term—The economic problems of the location, construction and maintenance of roads and railroads, grades, curvature, distance, &c. GILMORE, WELLINGTON.

18. FIELD PRACTICE. Four hours per week.
Second Year *Fall Term*—Land surveying.
Spring Term—Leveling, topographical and mine surveying.

19. FIELD PRACTICE. Four hours per week.
Third Year *Fall Term*—Railroad location.
Spring Term—Railroad and mine surveying—topographical work.

20. FIELD PRACTICE. Four hours per week.
Fourth Year—*Fall Term*—Track work, hydraulical, river, harbor and town surveying.
Spring Term—Original field work.

NOTE.—All students taking a course in drawing are required to supply themselves with the necessary drawing instruments and materials. For students taking the course in Free Hand drawing, the entire cost of instruments and materials need not exceed five dollars

for the year. Students in advanced classes in drawing are required to supply themselves with good drawing paper, a drawing board, protractors, compasses, bow pen and pencil, drawing pen and pair of triangles, scull, straight edge, drawing tacks, inks, water colors and brushes, the cost of which will vary from eight to twelve dollars. Students in the engineering courses have access to, and free use of, a large number of costly instruments and much valuable apparatus. Any one losing, breaking or damaging any such property, through carelessness or negligence, will be held responsible for such loss or damage.

Synopsis

FIRST YEAR.

Fall Term		*Winter Term.*		*Spring Term*	
French	3.	French	3.	French	3.
Chem. & Ph.	2.	Chem. & Ph.	2.	Chem. & Ph.	2.
Math.	5.	Math.	5.	Math.	3.
English	3.	English	3.	English	3.
F. Drawing	3.	F. Drawing	3.	F. Drawing	3.

SECOND YEAR

Analyt. Geom.	3.	Calculus	3.	Calculus	3.
Surveying	4.	Desc. Geom.	4.	Mine Survey	4.
Metaph.	3.	Metaph.	3.	Metaph.	3.
French	3.	French	3.	French	3.
Analyt. Chem.	2.	Analyt. Chem.	2.	Analyt. Chem.	2.
Prac. Ph.	2.	Prac. Ph.	2.	F. P.	4.
F. P.	2.	Dr.	2.		

THIRD YEAR.

Mechanics	5.	Mechanics	5.	Mechanics	5.
Geology	3.	Geol.	3.	Geol.	3.
Biology	2.	Biol.	2.	Biol.	2.
R. R. Loca.	3.	Civil Eng.	3.	Arch.	3.
Mech. Dr.	2.	Mech. Dr.	4.	Mech.	2.
F. P.	4.			F. P.	4.

Four original performaces this year.

FOURTH YEAR.

Mechanics	5.	Mech.	5.	R. R. Econ.	3.
Stereotomy	3.	Steam Eng.	3.	Metallurgy	3.
Mining	2.	Mineralogy	2.	Mineralogy	2.
Astronomy	2.	Astronomy	2.	Specifications	1.
C. Eng.	3.	C. Eng.	3.	Thesis & Thesis Drawing	60 hrs.
F. P.	4.			F. P.	4.

Three original performances this year including Thesis.

WEEKLY SCHEDULE—FIRST YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½ 9½ 10½ 11½ 1½	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.
WINTER.	8½ 9½ 10½ 11½ 1½	French. Physics and Chemistry & Ph. Mathematics.	English. Physics and Chemistry and Ph. Mathematics. F. Drawing.	French. Physics and Chemistry and Phys Mathematics.	English. Physics and Chemisty Mathematics. F. Drawing.	French. Physics and Chemistry. Mathematics.
SPRING.	8½ 9½ 10½ 11½ 1½	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French Chemistry and Physics. Mathematics.

SECOND YEAR.

FALL.	8½ 9½ 10½ 11½ 1½	Metaphysics. Surveying. Mathematics. French. Prac. Ph.	Surveying. Anal. Chemistry.	Metaphysics. Surveying. Mathematics. French. Prac. Ph.	Surveying. Analysis. Chemistry.	Metaphysics. Mathematics French. F. P. 4 hrs.
WINTER.	8½ 9½ 10½ 11½ 1½	Metaphysics. Des. Geometry. Mathematics. French. Prac. Ph.	Des. Geometry. Anal. Chemistry.	Metaphysics. Des. Geometry. Mathematics. French. Prac. Ph.	Des. Geometry. Anal. Chemistry.	Metaphysics. Mathematics. French. Drawing, 4 hrs.
SPRING.	8½ 9½ 10½ 11½ 1½	Metaphysics. G. & M. Surv. Mathematics. French.	G. & M. Surv. Anal. Chemistry.	Metaphysics. G. & M. Surv. Mathematics. French.	G. & M. Surv. Anal. Chemistry.	Metaphysics. Mathematics French. F. P., 4 hrs.

WEEKLY SCHEDULE—CONTINUED—THIRD YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	Mech.	Mech.	Mech.	Mech.	Mech.
	9½	Geology.	Biology.	Geology.	Biol.	Geology.
	10½	R. R. Loc.		R. R. Loc.		R. R. Loc.
	11½					
	1½	Mech. Dr.		Mech. Dr.		F. P., 4 hrs.
WINTER.	8½	Mech.	Mech.	Mech.	Mech.	Mech
	9½	Geology.	Biology.	Geology.	Biology.	Geology.
	10½	Engineering.		Engineering.		Engineering.
	11½					
	1½	Mech Dr.		Mech Dr.		
SPRING.	8½	Mech.	Mech	Mech.	Mech.	Mech.
	9½	Geology.	Biology.	Geology.	Biology.	Geology.
	10½	Architecture.		Architecture.		Architecture.
	11½					
	1½	Drawing.		Drawing.		F. P., 4 hrs.

FOURTH YEAR.

FALL.	8½	Mech.	Mech.	Mech.	Mech.	Mech.
	9½	Stereotomy.	Mining	Stereotomy.	Min n	Stereotomy.
	10½	C. Eng.	Astronomy.	C. Eng.	Astronomy.	C. Eng.
	11½					
	1½					
WINTER.	8½	Mech.	Mech.	Mech.	Mech.	Mech.
	9½	S. Engine.	Mineralogy.	S. Engine.	Mineralogy.	S. Engine.
	10½	C. Eng.	Astronomy.	C. Eng.	Astronomy.	C. Eng.
	11½					
	1½					
SPRING	8½	R. R. Econ.	Specifications	R. R. Econ.	Specifications.	R. R. Econ.
	9½	Metallurgy.	Mineralogy.	Metallurgy	Mineralogy,	Metallurgy.
	10½	Original work.	Original work.	Original work.		
	11½	Thesis & Thesis Draw. 60h.				
	1½					

MECHANICAL ENGINEERING.

PROF. ALDRICH.

The Department of Mechanical Engineering and the Mechanic Arts was established by the Board of Regents at the meeting in 1891.

The State Legislature made an appropriation the same year providing for the erection of a suitable building for instruction in this Department. The building is situated on the lower part of the campus, just above the Pittsburgh extension of the Baltimore and Ohio Railroad, and accessible by the new University road. It is about ninety-four by thirty-two feet, having a two-story part, fifty by thirty-two feet, giving three large rooms for work in wood and metal, and for construction and experimental work. It is supplied with water and natural gas, each at a pressure of about one hundred and twenty-five pounds per square inch, giving ample facilities for the generation of power for shop or laboratory work.

In 1893, the State Legislature made an appropriation for building an addition to the buildings already erected for this Department. This will be devoted more particularly to mechanical laboratory work, when the present equipment for such will be materially increased to meet the requirements of such instruction in experimental engineering.

The Course in Mechanical Engineering extends through four years and comprises academic instruction in English Language and Literature, French and German, Elementary Psychology, Logic, Ethics and Political Economy, Mathematics, including the Differential and Integral Calculus, Geology, Physics and Chemistry with laboratory work, Physiology and Hygiene; the following technical instruction in common with the students of Civil engineering; Land Surveying and Field Practice, Instrumental and Mechanical Drawing and Descriptive Geometry, Analytic and Applied Mechanics, Hydraulics, Materials of Engineering, Railroad Economy, Specifications and Contracts; and the four-years' Course in Mechanic Arts with the

entire Course in Mechanical Engineering and laboratory work as detailed elsewhere.

The object of this course is to enable young men who have pursued successfully the above prescribed studies to enter upon the proper development of their professional work with intelligence and well directed application. Whatever special branch of mechanical engineering they may enter as their chosen or prescribed field is not in any measure directly prepared for in the above course. It is rather the purpose to give thorough technical and practical training combined with academic courses containing the elements of a liberal education, as the best preparation for their future work, and as the proper foundation upon which they may build successfully their professional practice and reputation.

The technical instruction is supplemented throughout by experimental investigations and practical work in the shops and mechanical laboratory, visits of inspection, tests of power plants and the preparation of a graduating thesis. In general, the course in Mechanical Engineering has been arranged to develop the principles and to prepare for intelligent work involving the design, cost, construction, installation, testing and management of power generators, prime movers, power plants, and machinery for manufacturing, transportation and power transmission; and the planning cost, construction and management of manufacturing plants, shops and factories, with their systems of fire protection, and lighting, heating and ventilating plants.

Facilities for Instruction.

For this work, as well as that in the Mechanic Arts, all facilities for instruction, including apparatus, machinery, stock and material, are purchased by the yearly appropriations made to this Department by the Board of Regents, from the Morril! Fund, in accordance with the Act of Congress, August 30, 1890, referred to on page 9

For experimental work, the motive power machinery of the shop is freely used, including a 35 H. P. Wheelock engine, a 40 H. P. cylindrical return fire-tubular boiler, with a Deane pump, a Seller's Injection, a Hancock Inspirator and other accessories, with Pelton water wheels. A 50 H. P. Alden absorption dynamometer, and a Prony brake are used for power tests.

Carpenter's separating and throttling calorimeters with Barrus super-heating type are used for testing the quality of steam. Barrus apparatus is used for coal calorimetry, and Hempel's apparatus for analysis of gases and products of furnace combustion.

Steam-engine indicators, pressure and vacuum gauges, recording pressure-gauges with special one-hour and twelve-hour clock movements, tachometers, speed counters and indicators, self-timing speed recorder, thermometers, Hartford draught gauge, specially graduated spring balances and platform scales are used for observations. Standard thermometers and test guage, U. S. Standard sealed weights, dead weight gauge-testing apparatus and square inch test-

valves are used for calibrations. Slide rules, polar and adjustable-bar planimeter, and Coffin's averaging instrument facilitate computation of tests.

Admission.

Candidates for admission to the course in Mechanical Engineering are required to pass a satisfactory examination in English Grammar, Arithmetic, Plane Geometry, Algebra (through intermediate coefficients), Geography, United States History and Freehand drawing. In general, candidates must have satisfactorily completed the Preparatory course of the University, or its equivalent, excepting Latin, and Greek; and have had, in addition thereto the course in Free Hand Drawing, or its equivalent.

The studies of the University should not be anticipated; but a thorough and working knowledge of the elements acquired, so that academic and technical studies may be pursued to better advantage later on.

On the other hand, all students preparing to enter the course in Mechanical Engineering are advised to take the first-year course in Mechanic Arts, during their first preparatory year, and the second year Course in Mechanic Arts during their second preparatory year. Thus more time will be allowed for the advanced academic and technical studies, while the remaining shop work will be distributed throughout the four years to better advantage.

Graduating Thesis.

Each candidate for a degree is required to prepare a satisfactory thesis upon a subject immediately related to the studies of his course. It may be of the nature of a design for a machine or plant, of a test of machinery, plant or appliances, or an investigation in some line of mechanical engineering work.

The degree of Bachelor of Science in Mechanical Engineering will be given to those who successfully pass the prescribed course of studies and practical work and present a satisfactory thesis.

[Note.—The figure in parenthesis following the name of a study indicates the number of the course in that study. By consulting the number under that name in the "Courses of Instruction" beginning on page — the description of that course will be found. Where a bracketed and italicised title follows the name of a study the description will be found under the bracketed title. The other figures indicate the number of exercises per week.]

Course.

1. Mechanism and Shop Appliances.

Spring Term - Three exercises per week, recitations.

Elements, pairs and trains of mechanism; classification of Reuleaux and Willis; relative, comparative and constrained motion. Stan-

dard reference, tools and measures: principles, construction and operation of modern machine tools and work-shop appliances, small tools and jigs; adaptation of cutting tools to material and work.

2. MACHINERY AND MILLWORK.

Fall Term—Three exercises per week, lectures and recitations.

Mechanics of Machinery; friction, work and efficiency; the mechanism and machinery of transportation and power transmission; distribution of power in manufacturing plants.

3. HYDRAULIC MACHINERY.

Spring Term—One exercise per week, lectures.

Water pressure engines, turbines, water wheels, pumps and pumping machinery, accumulators, cranes and hydraulic machine tools.

4. POWER AND POWER PLANTS.

Spring Term—Two exercises per week, lectures and recitations.

The generation, storage, system of transmission, subdivision into units, distribution and measurement of power, economics of the design: location, construction, installation and management of power plants.

5. THERMODYNAMICS.

Fall Term—Three exercises per week, lectures and recitations.

Mechanical theory of heat; thermodynamics of steam and other heat engines, gas, vapor and petroleum engines; air compressors and motors; refrigerating machinery.

6. STEAM ENGINEERING.

Winter Term—Three exercises per week, lectures and recitations, one exercise per week in steam laboratory work.

Fuels and combustion; generation, distribution and use of steam; historical development and comparative study of steam engines, boilers and accessories; mechanism of valve gears and governors; injectors, steam pumps and condensers; selection of type best adapted to given work, elements of design, details of construction, installation, management and testing; economics of steam making and steam using; heating and ventilating systems.

7. WORKSHOP ECONOMY.

Spring Term—Two exercises per week, lectures and readings.

Economics of the design, construction, equipment and management of manufacturing plants; cost of manufactures; shop-order system and cost accounts.

8. JOURNAL MEETING.

Throughout the year—one hour per week.

The literature of engineering—journals, periodicals, proceedings of societies; engineering ethics, economics and precedents; data of engineering practice, classification and indexing.

Designing Machinery.

Winter and Spring Terms—Three exercises per week, lectures and recitations, third year.

Elements of machine design; materials, constructional details and oportions, adaptation of commercial sizes, designings, fastenings, nges, bearings, rotating pieces, connecting links and elements of echanism and details of shop machinery.

Fall and Winter Terms—Two exercises per week, lectures and recitations; two exercises (six hours) per week in practical designing, fourth year.

Steam, hydraulic and motive power machinery, mechanism and achinery for the transmission and distribution of power; special anufacturing machinery and accessories; plans, specifications, both f material and estimates.

Spring Term—Two exercises (six hours) per week, fourth year.

Thesis designs, power and manufacturing plants, motive power achinery; special plant appliances, heating, installation, fire proection; plans, specifications, estimates and contracts.

10. Mechanical Laboratory.

Throughout the year—one exercise (three hours) per week, third year. Two exercises (six hours) per week, fourth year.

Principles of design, construction, adaptation and calibration of standard engineering instruments for the measurement of temperature, pressure, speed, length, area, volume, weight and power. Qualitative and Quantitative measurements.

Experimental work in testing materials of construction, value of lubricants, balancing, rotating and reciprocating bodies, performance of shafting and belts under various loaded conditions, efficiency of mechanism, and the machinery of transmission.

Analysis of fuels and chimney gases, quality and flow of steam, performance of injection, boilers, steam engines and gas engines.

Performance of air compressors and blowers, motors and exhaust fans—efficiency of heating and ventilating systems.

Flow and discharge of water, testing turbines, hydraulic motors and machinery, duty of pumps and injection.

Electrical measurements, testing dynamos, motors and power plants.

Keeping record of tests, use of calculating instruments, tabulating and plotting results, final reports, Thesis work.

Synopsis.

FIRST YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Rhet. and Comp.	2.	Rhet. and Comp.	2.	Rhet. and Comp.	
[*English* 2.]		[*English* 2.]		[*English* 2.]	
Mathematics (1)	5.	Mathematics (1)	5.	Mathematics (1)	
French	3.	French	3.	French	
[*Mod Lang.* 1.]		[*Mod. Lang.* 1.]		[*Mod. Lang.* 1.]	
Chem. and Phy. (1)	5.	Chem. & Phy. (1)	5.	Chem. & Phy. (1)	
Shopwork	3.	Shopwork	3.	Shopwork	
[*Mech. Arts* 1]		[*Mech. Arts* 1.]		[*Mech. Arts* 1.]	

Freehand Drawing, two exercises per week, for those who have no taken it as preparatory work.

Second or third year course in the Mechanic Arts, if the first o second years' shopwork, or both, have been taken during preparatory period.

SECOND YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
Mathematics (2)	3.	Mathematics (2)	3.	Mathematics (2)	3.
French	3.	French	3.	French	3.
[*Mod. Lang.* 2.]		[*Mod. Lang.* 2.]		[*Mod. Lang.* 2.]	
Anal. Chem.	2.	Anal. Chem.	2.	Anal. Chem.	2.
[*Chem. and Phy.* 2.]		[*Chem. and Phy.* 2.]		[*Chem. and Phy.* 2.]	
M. and P. Sci. (1)	3.	M. and P. Sci. (1)	3.	M. and P. Sci. (1)	3.
Land Surveying	4.	Descrip. Geom.	4.	Mechanism	3.
[*Civil Eng.* 2.]		[*Civil Eng.* 3.]		[*Mech. Eng.* 1.]	
Physical Lab.	2.	Physical Lab.	2.	Physical Lab.	2.
[*Chem. and Phy.* 3.]		[*Chem. and Phy.* 3.]		[*Chem. and Phy.* 3.]	
Field Practice	1.	Inst. Drawing	1.	Inst. Drawing	1.
[*Civil Eng.* 2.]		[*Civil Eng.* 5.]		[*Civil Eng.* 5.]	
Shopwork	3.	Shopwork	3.	Shopwork	3.
[*Mech. Arts.* 2, 3.]		[*Mech. Arts* 2, 3.]		[*Mech. Arts* 2, 4, 5.]	

THIRD YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
German	2.	German	2.	German	2.
[*Mod. Lang.* 4.]		[*Mod. Lang.* 4.]		[*Mod. Lang.* 4.]	
Biology (1)	1.	Biology (1)	1.	Biology (1)	1.
Journal Meeting	1.	Journal Meeting.	1.	Journal Meeting	1.
[*Mech. Eng.* 8.]		[*Mech. Eng.* 8.]		[*Mech. Eng.* 8.]	
Geology (1)	3.	Geology (1)	3.	Geology (1)	3.
Analyt. Mech.	5.	Analyt. Mech.	5.	Applied Mech.	5.
[*Civil Eng.* 6.]		[*Civil Eng.* 6.]		[*Civil Eng.* 6.]	

THIRD YEAR—Continued.

Fall Term.		*Winter Term.*		*Spring Term.*	
Mach. & Mill w'k [*Mech. Eng.* 2.]	3.	Des. Mach'y. [*Mech. Eng.* 9.]	3.	Des. Mach'y [*Mech. Eng.* 9.]	3.
Mech. Drawing [*Civil Eng.* 8.]	2.	Mech. Drawing [*Civil Eng.* 8.]	2.	Mech. Drawing [*Civil Eng.* 8.]	2.
Mechanical Lab. [*Mech. Eng.* 10.]	1.	Mech. Lab. [*Mech. Eng.* 10.]	1.	Mech. Lab. [*Mech. Eng.* 10.]	1.
Shopwork [*Mech. Arts.* 6, 7.]	3.	Shopwork [*Mech Arts* 6, 7.]	3.	Shopwork [*Mech. Arts.* 6, 7.]	3.

An original literary production on a technical subject is required at the close of each term.

FOURTH YEAR.

Fall Term.		*Winter Term.*		*Spring Term.*	
German [*Mod. Lang.* 5.]	3.	German [*Mod. Lang.* 5.]	3.	German [*Mod. Lang.* 5.]	3.
Geology (2)	2.	Geology (2)	2.	Geology (2)	2.
Roofs and Bridges [*Civil Eng.* 11.]	5.	Steam Engine [*Mech. Eng* 6.]	3.	Metallurgy [*Civil Eng.* 15.]	3.
Thermodynamics [*Mech. Eng.* 5.]	3.	Hydraulics [*Civil Eng.* 14.]	5.	Power Plants [*Mech. Eng.* 4.]	2.
Designing Mach. [*Mech. Eng.* 9.]	4.	Designing Mach. [*Mech. Eng.* 3.]	4.	Workshop Econ. [*Mech. Eng.* 7.]	2.
Mech. Lab. [*Mech. Eng.* 10.]	2.	Designing Mach. [*Mech. Eng.* 9.]	4.	Hydraulic Mach. [*Mech. Eng.* 3.]	1.
Machine Const. [*Mech. Arts* 8.]	2.	Mech. Lab. [*Mech. Eng.* 2.]	2.	Specif. and Cont. [*Civil Eng.* 16.]	2.
				Thesis Design [*Mech. Eng.* 9.]	2.
				Mech Lab. [*Mech Eng.* 10.]	2.
				Machine Const. [*Mech. Arts* 8.]	2.

The work assigned for the shops and mechanical laboratory increases the apparent number of hours per week. Three hours of department work in these branches are construed to be equivalent to one class-room exercise.

An original literary production on a technical subject is required at the close of the Fall and winter Terms, and a Graduating Thesis at the close of the Spring Term.

MECHANICAL ENGINEERING COURSE—WEEKLY SCHEDULE.

FIRST YEAR.

Term.	Hour.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Through-out the Year.	8:30	French. (1)	English. (2)	French. (1)	English. (2)	French (1)	
	9:30	Chem. & Phys. (1)	Chem. & Physics. (1)	Chem. & Physics. (1)	Chem. & Physics. (1)	Chem. & Physics. (1)	
	10:30						
	11:30	Mathematics. (1)	Mathematics. (1)	Mathematics (1)	Mathematics.	Mathematics. (1)	
	1:30	Shopwork.		Shopwork.		Shopwork.	

SECOND YEAR.

Term.	Hour	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Fall. Winter Spring	8:30	Mor. and Pol. Sci. (1)		Mor. and Pol. Sci. (1)		Mor. and Pol. Sci. (1)	Shopwork.
	9:30	Land Surveying.	Land Surveying.	Land Surveying	Land Surveying.		
	9:30	Descriptive Geom.	Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.		
	9:30	Mechanism.		Mechanism.		Mechanism	
	10:30	Mathematics. (2)	Analyt. Chemistry.	Mathematics. (2)	Analyt. Chemistry.	Mathematics. (2)	
	11:30	French. (2)		French. (2)		French (2)	
	1:30	Phys. Laboratory.	Shopwork.	Phys. Laboratory.	Shopwork.	Field Practice and Inst. Drawing.	

THIRD YEAR.

Term.	Hour.	MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY.	FRIDAY.	SATURDAY.
Fall. Winter and Spring.	8:30	Mechanics.	Mechanics.	Mechanics.	Mechanics.	Mechanics.	Shopwork.
	9:30	Geology. (1)	Journal meeting.	Geology. (1)	Biology. (1)	Geology. (1)	
	10:30	Mach'y and Millwork.	German. (1)	Mach'y and Millwork.	German (1)	Mach'y and Millwork	
	10:30	Des. Machinery.	German. (1)	Des. Machinery.	German. (1)	Des. Machinery.	
	11:30						
	1:30	Mech. Drawing.	Shopwork.	Mech. Drawing.	Shopwork.	Mech. Laboratory.	

MECHANICAL ENGINEERING—WEEKLY SCHEDULE—CONTINUED.

FOURTH YEAR.

Term	Hour.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Fall.	8:30	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Math. Laboratory.
Winter		Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics.	
Spring.		Workshop Economy.	Specif. and Contracts.	Workshop Economy.	Specif. and Contracts.	Hyd. Machinery.	
Fall.	9:30	Thermodynamics.	Geology. (2)	Thermodynamics.	Geology. (2)	Thermodynamics.	
Winter		Steam Engine.	Geology. (2)	Steam Engine.	Geology. (2)	Steam Engine.	
Spring.		Metallurgy.	Geology. (2)	Metallurgy.	Geology. (2)	Metallurgy.	
Fall.	10:30	German. (5)	Des Machinery.	German. (5)	Des. Machinery.	German. (5)	
Winter		German. (5)	Des. Machinery.	German (5)	Des. Machinery.	German. (5)	
Spring.		German. (5)	Power Plants	German. (5)	Power Plants.	German. (5)	
	11:30						
	1:30	Shopwork.	Designing.	Mech. Laboratory.	Designing.	Shopwork.	

Course in the Mechanic Arts.

PROF. ALDRICH, DIRECTOR.

The Course in Mechanic Arts, extending through three years, comprises wood-working, carpentry, joinery and bench work, wood-turning and pattern-making; moulding and casting; forging in iron and steel; tin-smithing and sheet-iron work; pipe-fitting and boiler-work; machine shop practice, iron and brass work at the bench, hand-work with machine tools, and constructive work on machine tools, and a course of instruction in attendance on motive power and workshop appliances and machinery.

The object of this course is to present the simple elements of some of the constructive arts, which admit of being developed into a logical series of exercises, for their educational value rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the sudent is acquainted with the proper use of the fundamental tools and with the accuracy called for in the production of the elements of construction and of simple combinations of the same in fitting parts of work together. It combines sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and is therefore required of all students taking the full course in Mechanical Engineering.

In the fourth year, arranged entirely for students in Mechanical Engineering, machine construction is taken up in detail and practice given in the building, assembling and erecting of workshop and engineering appliances, motive power machinery and accessories.

Facilities for Instruction.

The material equipment of the department for this work includes such apparatus, tools and machinery, and supplies of stock and material as will enable the work of instruction and of construction to be carried on efficiently. The benches in the wood-working room are each

ed with a complete set of tools, and, as in the other branches, l tools and appliances are provided for occasional or class use. ood-working machinery consists of wood-turning and pattern-s' lathes, power planer, jointer, jig-saw, band-saw and circular-Each student has a compartment at the moulding bench, ... asks, moulding-boards and moulder's tools and material; at resent lead castings only are made, iron castings being made at a local foundry. The forges for working iron and steel are each equipped with a set of the essential tools and tongs, while extra and special sets of forge tools and appliances are placed for the use of two students in common. The forges have power blast and exhaust; and blacksmiths' drills, swage block, punching and shearing machine, power hack-saw, bolt-header are provided for more advanced work of construction. Gas forges are also used to familiarize the student with gas forging and tempering. In tin-smithing and sheet-iron work each student has a complete outfit with a gas furnace, and special tools in common. Stocks and dies and pipe-fitters' vises with ratchet drills and accessories form the equipment for this class of work. In all of the machine shop practice the students have a well stocked tool room to draw upon, besides their individual sets of small tools for work at the bench or with machine tools. The latter comprise, at present, a sixteen-inch screw cutting engine lathe, with all the latest improvements for tool-room and other special work, a twenty-four inch drill press, a sensitive drill, a sixteen-inch "double triple quick stroke" shaper, three twelve-inch screw cutting lathes, specially fitted also for hand turning in iron or brass, a speed lathe with complete equipment for hand turning, drilling and polishing, a two wheel bench emery grinder, a twist drill grinder, and a two-wheel emery tool grinder for water grinding.

Admission.

The three-year course in the Mechanic Arts is open to all students of the University. A partial course is provided for the students in Agriculture, consisting of three exercises per week throughout the year in carpentry, joinery, bench work and wood-turning, and of two exercises per week, during the Fall and Winter terms, in iron and steel forging.

Weekly Schedule Mechanic Arts Course for Mec . ical Engineering Course.

Term	Year.	MONDAY.	TUESDAY.	WEDNESDAY	THURSDAY	FRIDAY.	SATURDA
Fall.	I.	Carpentry, Joinery.		Carpentry. Joinery.		Turning.	
	II.		Forging.		Forging, Patterns and Castings.		
	III.		Iron work at bench.		Iron work at bench.		
	IV.	Machine construction.				Machine construction.	Hand work. Machine tools,
Winter.	I.	Carpentry. Joinery.		Carpentry, Joinery.		Turning.	
	II.		Forging.		Forging, Patterns and Casting.		
	III.		Iron work at bench		Iron work at bench.		
	IV	Machine construction.				Machine construction.	Hand work. Machine tools.
Spring.	I.	Carpentry. Joinery.		Carpentry, Joinery.		Turning.	
	II.		Tin-smithing Machine tools.		Pipe fitting Machine tools.		
	III.						Machine tools.
	IV.	Machine construction.				Machine construction.	

The exercises are of three hours duration—1:30 to 4:30 P. M., and on Saturday, 8:30 to 11:30 A. M.

Weekly Schedule for a Three - Year Course in the Mechanic Arts.

Term	Year.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
Fall.	I.		Carpentry, Joinery.	Turning.	Carpentry, Joinery.	
	II	Forging.				Forging.
	III.	Iron work at bench.		Iron work at bench.		Handwork machine tools.
Winter.	I.		Carpentry. Joinery.	Turning.	Carpentry, Joinery.	
	II.	Forging.				Forging.
	III.	Iron work at bench.		Iron work at bench.		Handwork machine tools.
Spring.	I		Pattern making.	Moulding. Casting.	Pattern-making.	
	II.	Tin-smithing.				Pipe-fitting.
	III.	Machine Tools.		Machine Tools.		Machine Tools.

The Exercises are of three hours duration—1:35 to 4:30 P. M.

In either of the above schedules, those students who take the course in Military Science and Physical Training begin their shop work at 1:00 P. M., and so arrange their time that they will complete the required exercises without in any way conflicting with their later afternoon military and physical training.

COURSE.

1. WOODWORKING.

Throughout the Year.—Two exercises (six hours) per week.

Carpentry, joinery and woodworking at the bench; exercises with the fundamental edge tools in soft and hard woods, in different directions with respect to the grain; quality and strength of commercial wood, fastenings for woodwork; board jointing, matching, beading and moulding; fitting cabinet and builders' hardware; simple jointed wood-work, straight and angle joints; mitered, mortised and dove-tailed joints and framing; finishing surfaces; principles of construction, use and sharpening tools; project work.

Throughout the Year.—One exercise (three hours) per week.

Wood turning and use of woodworking machine tools; turning fundamental geometric forms in soft and hard woods,—plain and stepped cylinders, single and double cones, concave and convex beading, and fitting reversed forms of these reversed curves; combinations of these in the production of simple turning projects; face-plate work, chucking, boring and threading; finishing and polishing. Exercises on planer, jointer, buzz-saw, jig-saw and band saw.

2. PATTERN MAKING AND CASTING.

Throughout the Year.—One exercise (three hours) per week.

Pattern making; application of the foregoing instruction in its relation to pattern making for machine construction; draft and shrinkage allowances; use of fillets; simple draw patterns and turned patterns; dowelling and parted patterns; cores and core boxes; finish of patterns; typical forms of machine elements and patterns for work to be executed later in the machine shop.

Moulding and casting in connection with pattern making; selection, preparation and use of moulding, facing and parting sands; use of cores; core making and drying; venting and locating gates and risers; use of typical moulders' tool and appliances; making castings from exercise patterns and from those for machine shop exercises and construction.

3. FORGING.

Fall and Winter Term.—Two exercises (six hours) per week.

Iron and steel forging; drawing out and sizing; quality of iron, cutting, bending, twisting, punching, splitting, forming, use of flatter, fuller, set and swager; welding iron, scarfed, lap, tongue and butt welds; exercises in jointing, fitting and combinations of elements; working steel; forging, tempering, annealing, case-hardening; tool-smith's work, making tools to be used later in the machine shop, using typical steel for the typical tools; working coal and gas forges.

4. TIN-SMITHING.

Spring Term.—One exercise (three hours) per week.

Tin, sheet-iron and copper work; soft and hard soldering, brazing, tinning, forging and care of coppers, seamless and solder joints in typical geometric forms.

5. PIPE-FITTING AND BOILER WORK.

Spring Term—One exercise (three hours) per week.

Cutting pipe, threading, fitting sleeves, nipples, tees, ells, plugs, bushings, unions and valves; bending and coiling pipe; making joints and use of packing in screw and flange connections; making joints and fitting connections in lead pipe. Cutting pipe and bolt holes in boilers, making screwed and flanged connections to boiler; ratchet drilling, soft and hard patches, tank, boiler and truss riveting, caulking and tube expanding.

6. MACHINE SHOP WORK.

Fall Term—Two exercises (six hours) per week.

Ironwork at the bench; chipping, filing, scraping, fitting, polishing, bevelling, chamfering, key-seating; laying out and guaging work; fitting interior and exterior surfaces, right and oblique angles; formation of a straight edge and a surface plate; use of machinists' small tools; bench work in brass.

Winter Term—Two exercises (six hours) per week.

Ironwork at the bench; continuation of the work of the Fall Term in more difficult exercises; work in wrought iron and annealed steel; formation of standard measuring instruments and guages and machinists' small tools.

Fall and Winter Terms—One exercise (three hours) per week.

Handwork with machine tools; drilling, tapping, screw-cutting with taps, dies and chasers; hand-turning in metal, using soft metal brass, cast iron and wrought iron; care and construction of edge tools for metal working.

Spring Term—Three exercises (nine hours) per week.

Machine tools; drill-press, lathe, shaper, planer, emery grinding, milling machine, turret lathe work; the construction, care and use

edge tools, as adapted to the material, kind of work and output. roduction of finished machine elements and projects, and reproduction of typical details of the shop tools and machinery; interhangeable work. Performance of machine tools, efficiency of output.

. Attendance.

Throughout the Year.—Time to be assigned for each student.

Each student will be detailed at various times during the year for luty on the following stations: Steam boiler, steam heating and ventilating apparatus and blowers, steam engine, transmission machinery, and tool room.

At each of these stations the students will keep a log or record of the condition, performance or output, as the case may be, of that of which he has been put in charge. Thus: (1) boiler log,—weight of coal and water, pressure of steam, gas supply service water, air draft, temperature of chimney gases and of service and feed water; (2) steam-heating and air data—pressure of forge blast and exhaust, of hot air in pipes and of steam in heater, temperature of the outside and inside air, of the hot air and steam; speed of blowers and fans; (3) Steam engine and—speed and indicator cards and performance of the engine; (4) transmission machinery, speeds,—condition of pulleys, belts, clutches and couplings, and reports; (5) tool room —condition of stock, supplies, tools, standard gauges, maintain the order and efficient condition of the tool room, and report.

8. Machine Construction.

Throughout the Year.—Two exercise (six hours) per week.

Building assembling and erecting machinery; reproproduction of shop machine tools and work from original designs; lining, leveling, locating bearings and hangers; running line of shafting, putting up pulleys and and belts; setting up machinery, construction of motive power machinery and accessories; making special apparatus for shop and mechanical laboratory.

AGRICULTURE.

PROF. RANE.

I. AGRICULTURE—Soils, their origin, character, etc. Modes of cultivation. Machinery, buildings, etc. Lectures and recitations. Collateral reading. Practical work.

Freshman Year.

First Term.—Twice a week. Emerson and Flint's "Manual of Agriculture."

Second Term.—Twice a week. Johnson's "How Crops Grow," or "How Crops Feed."

Senior Year.

Five hours a week throughout the year in Advanced Agriculture. Books of reference, Lloyd's "Agricultural Science;" Storer's "Agriculture," etc., etc.

II. DOMESTIC ANIMALS, STOCK FEEDING AND BREEDING—Lectures and recitations.

Freshman Year.

Third Term.—Twice a week. Stewart or Armsby, on "Feeding Animals."

Sophomore.

Second Term.—Twice a week. Miles's "Stock Breeding."

Junior Year.

First Term.—Twice a week. Curtis's "Horses, Cattle, Sheep and Swine."

III. ENTOMOLOGY—Lectures and recitations.

Junior Year.

Second Term.—Twice a week. Comstock's "Introduction to Entomology;" Weed's "Economic Entomology," etc., etc.

IV. HORTICULTURE—Pomology, Olericulture, Floriculture and Landscape Horticulture. Lectures, recitations, collateral reading, and practical work.

Sophomore Year.

First Term—Twice a week. Fruit Growing. Books of reference: Warder's Pomology; Downing's Fruits and Fruit Trees of America; Thomas's American Fruit Culturist; Barry's Fruit Garden; Fuller's Grape Culturist, etc., etc.

Third Term—Twice a week. Vegetable gardening and seed growing. Books of reference: Henderson's Gardening for Profit; Horticulturist's Rule Book; Brill's Seed Growing, etc., etc.

Junior Year.

Spring Term—Twice a week. Floriculture and Landscape Horticulture. Books of reference: Henderson's Practical Floriculture; Downing's Landscape Gardening, etc., etc.

Senior Year.

Five hours a week throughout the year in advanced Horticulture. Lectures, recitations, and economic scientific research.

Short Course in Agriculture.

ONE YEAR.

FIRST TERM. 5 hours.—*Two times a week.* Emerson and Flint's "Manual of Agriculture."
—*Two times a week.* Fruit growing.—Barry's "Fruit Garden."—*Once a week.* Practical Work.

SECOND TERM. 5 hours.—*Two times a week.* Johnson's "How Crops Grow," "How Crops Feed."
—*Two times a week.* Miles's "Stock Breeding."
—*Once a week.* Green House Work.

THIRD TERM. 5 hours.—*Two times a week.* Stewart or Armsby on "Feeding Animals."
—*Two times a week.* Vegetable Gardening and Seed Growing. Henderson's "Gardening for Profit"; Brill's "Seed Growing."
—*Once a week.* Practical Work.

THE LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department. By an act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law; Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleading and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Notes on Common Law Pleading and Practice in West Virginia by Professor Brooke, Williams on Real Property, and for *reference* the Code of West Virginia, and subsequent Acts of the Legislature.

The text-books will be supplemented by lectures each day, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-books used in Constitutional Law are the "Federalist" and Cooley's Principles of Constitutional Law. This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the

United States, interpreting its provisions, are also the subject of lectures.

The text-book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adam's Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, Barton, Addison, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence;

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the laws relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course is covered by the lectures of one year, thus enabling the student, if he is prepared for it, to complete the course in one year. But whether he shall give one or two yeaas to the course must be determined by his qualifications when entering. The Junior and Senior divisions of the course are found on a subsequent page.

As one term is not much dependent on another, as respects many ot the topics, a student may enter at the beginning of either term, but it is always advisable to enter during the Fall Term if possible.

The work of the year is divided among the three terms as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings.	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleadings. Evidence.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2 books (continued.) Blackstone, 3rd and 4th books (begun.)	PROF. BROOKE.
Agency. Partnership. Surety and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued.) Criminal Law, &c., Blackstone, 3d and 4th books (continued.) Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

The following are the Junior and Senior divisions of the course:

JUNIOR COURSE.	SENIOR COURSE.
Blackstone. Rights of Persons. Rights of Things. Torts. Criminal Law.	Common Law Pleading. Real Property. Negotiable Paper. Partnership. Suretyship and Guaranty.
Statute Law.	Evidence.
Constitutional Law.	Equity Pleading and Practice.
Contracts.	Bailments.
Agency.	Insurance.
Evidence.	Corporations.
Sales.	Practice in the Courts.

The methods of instruction consist of Lectures and Examinations, from approved text-books read in course, the drawing of the various legal papers requisite in the ordinary practice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot Court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

REQUIREMENTS FOR ADMISSION AND DEGREES.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

The Law Department does not hold itself responsible for anything but the attainments of the student in his law studies; nevertheless, the degree of his proficiency in the English branches is estimated in grading him for a degree in law. If a student realizes that he is deficient in general education, he can enter some of the classes in the academic departments of the University in connection with his law studies. But this is a matter resting entirely with the student.

The qualifications of a student for receiving the degree of Bachelor of Laws is not measured by the time he has spent in completing the course, whether that be one year, or two years, or many years. But the sole test of his title to the degree is his ability to successfully pass a rigid examination on the whole course, and thus demonstrate that he is worthy of it. The value of a diploma from this department will not be impaired by conferring it where it is not merited. Time, therefore, is not made a test in any case, except that a student must have been in attendance upon the lectures at least one scholastic

year before he will be admitted to the examination for a degree. If he fails to reach the standard in his first examination, he may apply for another examination one year thereafter, whether he has continued in attendance at the University or not.

EXPENSES.

Tuition in the Law Department is free to West Virginia Students.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

The summary of the expense of boarding, &c., given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text-books essential to the successful prosecution of the work of the law school are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence, Smith's Mercantile Law, Adams' Equity, The Fœderalist, Woolsey's International Law, Cooley's Principles of the Constitution. These books are kept at the University and sold to students at cost.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second hand" at from $12.00 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly distipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be over-estimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old

maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course: the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar, the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

WEEKLY SCHEDULE OF LAW LECTURES.

JUNIOR CLASS.

	Hrs.	Monday.	Tuesday	Wednesday.	Thursday.	Friday.
Prof. Brooke.	8½ 9½ 10½	Blackstone. ..... Con. & Int. Law	....	Blackstone. ..... Con. & Int. Law	....	..... Blackstone. .....
Prof. Willey.	10 11	..... Evidence.	Com'l Law.	..... Evidence.	Com'l Law.	....

SENIOR CLASS.

	Hrs.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Prof. Brooke	8½	.....	Pleading.	.....	Pleading.	.....	Pleading.
Prof. Willey.	8½ 9½ 10 10½	..... Equity.	.... Com'l Law.	..... Equity.	.... Com'l Law.	Evidence. .... Com'l Law.	

SCHOOL OF MILITARY INSTRUCTION AND PHYSICAL TRAINING.

JAMES W. HARTIGAN, M. D.
Instructor in Physical Training.

LIEUTENANT FRANK DE. W. RAMSEY, 9th U. S. Infantry.
Professor of Military Science and Tactics.

At a meeting of the Board of Regents in July, 1893, this school was organized. All students entering the preparatory or freshman classes are required to enroll in this school for two years. The object of the school is to combine military instruction with physical training in such a way as to beget the habit and desire in the student to be prompt, obedient and efficient in the discharge of his duties, to confine college athletics within reasonable bounds, and direct physical education in more healthy channels, that it may act as an adjunct to mental development.

Many young men when entering college come from an active life and lapse into the sedentary habits of the student, or being suddenly released from the restraints of home, devote too much time to excessive athletics. This school is intended to correct both evils. The time devoted to it is five hours per week throughout the year, and the instruction is as set forth below:

First Year—Fourth Section.

	Fall T.	*Winter T.*	*Spring T.*
Military Department:	3 hrs.	3 hrs.	4 hrs.
Department of Physical Training:	2 hrs.	2 hrs.	1 hr.

Second Year—Third Section.

Military Department:	3 hrs.	3 hrs.	4 hrs.
Department of Physical Training:	2 hrs.	2 hrs.	1 hr.

THE MILITARY DEPARTMENT.

The Military Department is included in the School of Military Instruction and Physical Training and the term of service required is the same.

The training of the student in this department will instill methodical habits and will require neatness, promptness and exactness.

The student will acquire an erect carriage and learn how to obey and to command.

Each student must be provided with a uniform consisting of cap, blouse and trousers and costing complete about $20. This uniform must be worn at all times.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books are not furnished to professional students.

Such cadets must not be less than sixteen nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set fort the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The Commandant of Cadets, or the President, will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts—the names of the Regents are prefixed to this catalogue.

District.	Counties.	Vacancies April 1, 1894.
I.	Hancock, Brooke, Ohio.	5
II.	Marshall, Wetzel Marion.	1
III.	Ritchie, Doddridge, Harrison, Tyler.	3
IV.	Pleasants, Wood, Wirt, Gilmer, Calhoun.	5
V.	Mason, Jackson, Roane.	6
VI.	Putnam, Cabell, Wayne.	1
VII.	Lincoln, Logan, Wyoming, McDowell, Mercer, Raleigh.	7
VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.	4
IX.	Kanawha, Clay, Nicholas, Braxton, Boone.	2
X.	Lewis, Randolph, Upshur, Barbour, Webster.	3
XI.	Preston, Monongalia, Taylor.	none.
XII.	Hampshire, Hardy, Grant, Mineral, Pendleton, Tucker.	none.
XIII.	Berkeley, Jefferson, Morgan.	5

Course of Instruction.

LIEUTENANT RAMSEY, U. S. ARMY,

ELEMENTARY COURSE.

The elementary course of two years which is repuired of all students will embrace both practical and theoretical instruction in Artillery and Infantry drill regulations and guard duty. The theoretical part of the course occupies one hour per week during the fall and winter terms of each year.

ADVANCED COURSE.

An advanced course of two years is open to those students who have completed the elementary course. It will consist of practical and theoretical instruction in military science, drill regulations, U. S. Army regulations, marksmanship, military signalling, fencing, &c. A student successfully completing this course will be competent to hold a commission in any military organization. The theoretical portion of this course will occupy one hour per week during the winter terms. The entire course will occupy not to exceed four hours per week.

For the purpose of instruction Cadets are divided into sections corresponding with their military proficiency and length of service. Students will be required to enter the 4th section but having previous military experience may be transferred to higher sections upon passing satisfactory special examinations.

For the purpose of administration and drill the Corps of Cadets is organized as a battallion of infantry. Cadet officers exercise the command and perform the duties of officers of their grade in the State National Guard. All appointments to office are made after competitive examination.

DEPARTMENT OF PHYSICAL TRAINING.

JAMES W. HARTIGAN, M. D., INSTRUCTOR.

All male students entering the preparatory or freshman classes are required to take this course for two years.

The department has a well equipped gymnasium with plunge and shower baths attached. It has a limited number of good boats and it is hoped that in a few years boating will be one of the most attractive and beneficial features of this work, as the University is located on an arm of one of the most beautiful boating courses in the country.

Students taking this course will provide themselves with towels and one pair of rubber shoes. Only members of special sections will be required to procure gymnasium suits.

All students will be given a critical physical examination upon entering. An accurate record will be kept and each will be assigned the special work his examination shows him to need. The examinations will be repeated from time to time during the year that the instruction may be intelligently and profitably directed.

The instruction here will aim not only to the preservation of health during the mental toil of a college career, but also to the correction and perfect development of the whole physical organization.

Course of Instruction.

FISRT YEAR.

The fall term will be given to light gymnastics. The pupils will be drilled to music in the simple motions of stepping, charging, lunging, hopping, running, &c. The winter term will be given to other free gymnastic movements including the various head, neck, eye, chest, waist and extremity exercises. During the spring term the time will be given to instruction in calisthenics, figure marching, running, and light dumb bell exercises.

SECOND YEAR.

During the fall term the light dumb bell exercises will be continued with exercises in vaulting, jumping and club swinging. The winter term will be devoted to club swinging, chest machine work, ladder and bar-bell exercises, and the spring term to horizontal and parallel bar work, boxing and ring exercises.

After the completion of this course students who do not take the advanced military course will be required to take gymnasium work one hour a week during their attendance at the University.

This does not apply to professional students.

Military Graduates and Distinguished Cadets, 1892-3.

Graduates in the course of Military Science and Tactics, June 1893.

1. Cadet Major Macker Babb, Distinguished Cadet.
2. Cadet Second Lieutenant W. A. Burdette, Distinguished cadet.
3. Cadet First Lieutenant Kemble White, Distinguished cadet.
4. Cadet First Lieutenant Joseph L. Henderson.
5. Cadet Captain A. Brown Smith.
6. Cadet First Lieutenant Fred M. Minshall.
7. Cadet Second Lieutenant Walter D. N. Rogers.
8. Cadet Major William C. Myer.
9. Cadet Sergeant Major Altha Warman.
10. Cadet First Sergeant Charles E. Carrigan.
11. Cadet First Lieutenant Edward T. Hartman.
12. Cadet Captain Claude W. Gore.
13. Cadet Ordnance Sergeant John W. Wiles.
14. Cadet Captain Robert H. Ramsay.

The names are given in the order of merit. The three first named have been specially recommended to the War Department of the United States and to the Governor of the State of West Virginia.

Distinguished cadets of the Undergraduate Sections, June, 1893.

Second Section.

Cadet Sergeant Clement R. Jones.
Cadet Sergeant A. C. Hartley.
Cadet Quartermaster Sergeant John Nuzum.

Third Section.

Cadet Corporal J. Kunkle.
Cadet Corporal W. R. Standiford.
Cadet Corporol H. M. Leps.

Fourth Section.

Cadet J. B. Protzman.
Cadet J. Keely.
Cadet C. E. McCoy.

Roster of Officers of the Corps of Cadets for the Year 1893-4.

Commandant Cadets.

	Date Commission.
Frank DeW. Ramsey, 1st Lieutenant 9th U. S. Inf	Sept. 25, 1891

Cadet Major.

Macker Babb	June 14, 1893

Staff.

Major James W. Hartigan, Surgeon	Sept. 23, 1889
Cadet Captain Robert H. Ramsay, Captain of Artillery	June 14, 1893
Cadet First Lieutenant Clement R. Jones, Adjutant	June 14, 1893
Cadet First Lieutenant John Nuzum, Signal Officer	June 14, 1893
Cadet First Lieutenant H. A. Steed, Quartermaster	Sept. 13. 1893

Cadet Captains.

1. Kemble White, Company B	June 14, 1893
2. Joseph L. Henderson, Company A	June 14, 1893
3. *Captain of Artillery.*	

Cadet First Lieutenants.

1. Charles E. Carrigan, Company A	June 14, 1893
2. *Adjutant.*	
3. *Signal Officer.*	
4. D. B. Kinkaid, Company B	June 14, 1893
5. *Quartermaster.*	

Cadet Second Lieutenants.

1. C. N. Ridgway, Company B	Sept. 13, 1893
2. J. W. Hughes, Company A	Sept. 13, 1893

Cadet Non-Commissioned Staff.

1. E. H. Pearcy, Sergeant-Major	Sept. 13, 1893
2. C. E Krebs, Quartermaster-Sergeant	Sept. 13, 1893
3. H. M. Leps, Principal Musician	June 14, 1893
4. T. C. Johnson, Ordance Sergeant	Nov. 15, 1893

Cadet First Sergeants.

1. J. Kunkle, Company B	Nov. 27, 1893
2. W. R. Standiford, Company A	Feb. 3, 1894

Cadet Sergeants.

1. J. G. Knutti, Company A ..... Sept. 13, 1893
2. B. G. Moore, Company B ..... Sept. 13, 1893
3. J. H. Collins, Company A ..... Sept. 13, 1893
4. C. F. Jolliff, Company B ..... Sept. 13, 1893
5. J. B. Protzman, Company A ..... Sept. 13, 1893
6. O. L. Haught, Company B ..... Sept. 13, 1893
7. ..... Sept. 13, 1893

Cadet Corporals.

1. J. B. Payne, Company A ..... Sept. 13, 1893
2. W. F. Naret, Company B ..... Sept. 13, 1893
3. J. Keely, Artillery ..... Sept. 13, 1893
4. E. F. Allen, Artillery ..... Dec 16, 1893
5. W. H. South, Artillery ..... Dec 16, 1893
6. H. F. Smith, Artillery ..... Dec 16, 1893
7. ..... Dec. 16, 1893

Enrollment of the Military Department, 1893-4.

CADET GRADUATES: 5.

Order of Standing.	*Name and Rank.*	*District.*	*Year of Enrollment.*
1.	Babb, M., Cadet Major	XII	1889
2.	White, K., Cadet Captain	II	1888
3.	Henderson, J. L., Cadet Captain	XI	1888
4.	Carrigan, C. E., Cadet First Lieutenant	II	1889
5.	Ramsay, R. H., Cadet Captain	V	1888

First Section: 9.

1.	Jones, C. R., Cadet First Lieutenant and Adjutant	VIII	1890
2.	Nuzum, J., Cadet First Lieutenant and Signal Officer	V	1890
3.	Kinkaid, D. B., Cadet First Lieutenant	IX	1890
4.	Steed, H. A., Cadet First Lieutenant and Quartermaster	IV	1890
5.	Ridgway, C. N., Cadet Second Lieutenant	XI	1890
6.	Hughes, J. W., Cadet Second Lieutenant	III	1890
7.	Pearcy, E. M., Cadet Sergeant Major	IV	1890
8.	Krebs, C. E., Cadet Quartermaster Sergeant	II	1890
9.	Johnson, T. C., Cadet Ordnance Sergeant	VI	1890

Second Section: 12.

1.	Kunkle, J., Cadet First Seageant	VIII	1891
2.	Standiford, W. R., Cadet First Sergeant	VIII	1891
3.	Leps, H. M., Cadet Principal Musician	VIII	1891
4.	Knutti, J. G., Cadet Sergeant	X	1891
5.	Moore, B. G., Cadet Sergeant	III	1891
6.	Collins, J. H., Cadet Sergeant	Vol	1891
7.	Jolliff, C. F., Cadet Sergeant	II	1892
8.	Haught, O. L., Cadet Sergeant	XII	1891
9.	Protzman, J. B., Cadet Sergeant	XII	1892
10.	Payne, J. B., Cadet Corporal	X	1892
11.	Naret, W. F., Cadet Corporal	VI	1892
12.	Barlow, C. A., Cadet Musician	X	1893

Third Section: 15.

er of ding.	Name and Rank.	District.	Year of Enrollment.
	South, W. H., Cadet Corporal	XI	1892
	Keely, J., Cadet Corporal	IX	1892
	Friend, L. L., Cadet	X	1892
	Noll, A. B., Cadet	XIII	1892
	Allemong, W. B., Cadet	II	1892
	Ore, J. M., Cadet	XI	1892
	Narret, E. L., Cadet	VI	1892
	McCoy, C. E., Cadet	VI	1892
	Smith, H. F., Cadet Corporal	III	1892
	Reickard, L. N., Cadet	Vol	1892
	Hess, H. C., Cadet	XII	1892
	Allen, E. F., Cadet Corporal	IX	1892
	Baker, J. T., Cadet	VII	1892
	Cramer, C. W., Cadet	XII	1892
	Toudy, H. F., Cadet	VI	1892

Fourth Section.

1.	Brooks, E. A., Cadet	X	1893
2.	Eaton, H. A., Cadet	IX	1893
3.	Utt, D., Cadet	XI	1893
4.	Waddell, C. H., Cadet	I	1893
5.	Russell, B. W., Cadet	IV	1893
6.	Cracraft, W. A., Cadet	I	1893
7.	Berry, B., Cadet	I	1893
8.	Bowles, L. B., Cadet Musician	VI	1893
9.	Kimmer, W. C., Cadet	XIII	1893
10.	Palmer, H. E., Cadet	IX	1893
11.	Carmack, A. B., Cadet	Vol	1893
12.	Wotring, F. H., Cadet	XI	1893
13.	Amman, W. D. R., Cadet	XI	1893
14.	Scott, B. F., Cadet	XI	1893
15.	Alexander, L. C., Cadet	VI	1893
16.	Meredith, J. T., Cadet	II	1893
17.	Shaw, H., Cadet	II	1894
18.	Waters, L. V., Cadet	XII	1894
19.	Reynolds, E. B., Cadet	XII	1894
20.	Rau, W. F., Cadet	XIII	1894
21.	Cunningham, J. R., Cadet	Vol	1894
22.	Boyd, W. T., Cadet	XII	1894
23.	Pancake, W. A., Cadet	Vol	1894
24	Moore, B. W., Jr., Cadet	VIII	1893
25.	Post, S. H., Cadet	III	1893
26.	Patton, W. T., Cadet	IX	1893

Changes and Casualities Since Last Catalogue.

HONORABLY DISCHARGED. 36.

Graduated from the University, 9.

Cadet Major W. C. Meyer.....June 14, 1893
Cadet Captain C. W. Gore.....June 14, 1893
Cadet Captain A. B. Smith.....June 14, 1893
Cadet First Lieutenant E. T. Hartman.....June 14, 1893
Cadet First Lieutenant F. M. Minshall.....June 14, 1893
Cadet Second Lieutenant W. A. Burdette.....June 14, 1893
Cadet Sergeant Major A. Warman.....June 14, 1893
Cadet Sergeant O. J. Chambers.....June 14, 1893
Cadet B. W. Chambers.....June 14, 1893
.....June 14, 1893

Resigned 27.

Cadet Ordnance Sergeant J. W. Wiles.....June 14, 1893
Cadet Corporal M. Perry.....June 14, 1893
Cadet J. C. Brown.....June 14, 1893
Cadet C. S. Elliot.....June 14, 1893
Cadet J. W. English, Jr.....June 14, 1893
Cadet G. H. French.....June 14, 1893
Cadet R. Park.....June 14, 1893
Cadet L. Robb.....June 14, 1893
Cadet S. C. Stathers.....June 14, 1893
Cadet W. W. Venable.....June 14, 1893
Cadet L. A. Walker.....June 14, 1893
Cadet W. M. Thomas.....June 14, 1893
Cadet W. H. Sands.....Sept. 13, 1893
Cadet Sergeant Major J. Dudding.....Sept. 13, 1893
Cadet Sergeant G. L. Bambrick.....Oct. 16, 1893
Cadet W. C. Bambrick.....Oct. 16, 1893
Cadet W. L. Beale.....Oct. 16, 1893
Cadet A. E. Boyd.....Oct. 16, 1893
Cadet S. P. Boyd.....Oct. 16, 1893
Cadet W. G. Swaney.....Oct. 16, 1893
Cadet First Lieutenant W. D. N. Rogers.....Oct. 16, 1893
Cadet P. F. White.....Oct. 17, 1893
Cadet B. H. S. Woodford.....Oct. 17, 1893
Cadet Ordnance Sergeant H. C. Duncan.....Oct. 17, 1893
Cadet Sergeant, G. H. A. Kunst.....Oct. 25, 1893
Cadet T. M. Williams.....Oct. 25, 1883
Cadet Second Lieutenant A. C. Hartley.....Nov. 15, 1893
.....Nov. 23, 1893

DROPPED FROM THE ROLLS, 17.

Resignation accepted. Record or service unsatisfactory: 5.

Cadet W. H. Henretta.....Sept. 15, 1893
Cadet F. Midelburg.....Jan. 12, 1894
Cadet R. N. Wilson.....Jan. 16, 1894
Cadet P. H. Dolan, Jr.....March 8, 1894
Cadet H. C. Montgomery.....March 13, 1894

For Absence Without Leave: 6.

det L. R. Charter	Sept. 15. 1893
det W. L. Cooke	Sept. 15, 1893
det W. G. Duncan	Sept. 15, 1893
det J. R. Hagan	Sept. 15, 1893
det H. H. Shinn	Sept. 15, 1863
det F. L. Downey	Oct 16, 1893

By Order of the Faculty: 1.

adet C. A. Nuzum	Jan. 8, 1894

Resigned, to be Honorably Discharged at End of College Year: 5.

Cadet C. W. Ross	Oct. 17, 1893
Cadet P. Konrad, Jr	Dec. 4, 1893
Cadet Sergeant W. D. Ropp	Jan. 12, 1894
Cadet C. L. Klotz	Feb. 1, 1894
Cadet R. H. Higginbotham	Feb. 2. 1894

Dishonorably Discharged: 4 — *By Order of a Court Martial*: 4

Cadet F. J. Lockwood	April 20, 1893
Cadet H. D. Baker	June 14. 1893
Cadet A. F. Rader	June 14, 1893
Cadet A. P. Romine	June 14, 1893

Summary.

Number of Cadets enrolled April 10, 1893	88
New Cadets enrolled during the year	36
Total	124
Honorably dischargeed during the year	36
Dropped from the roll during the year	17
Dishonorably discharged during the year	4
Number of Cadets enrolled April 10, 1894	67
Total	124

III. SPECIAL COURSES.

Book-Keeping.

PROF RANE.

Three hours a week throughout the year. A sufficient course for common business, and a good introduction to an advanced Commercial Course and a Course in Commercial Law.

Pedagogics.

PROF. MILLER.

Five hours a week throughout the year. This course includes Science and Art of Teaching, History of Education, Educational Psychology, School Management,, State Laws and Requirements for Free Schools, &c., &c. The course is very important to students who expect to teach. Instruction is given by lectures, recitations, collateral reading and original exercises. A good collection of the latest and best works on Pedagogy and educational subjects has been added to the Library.

Anatomy.

PROF. HARTIGAN.

Five hours a week throughout the year. Designed especially for those who are preparing for the study of Medicine. For full description of the course, see the announcement of the School of Biology.

Physical Culture.

PROF. HARTIGAN.

A good Gymnasium Course for exercise and physical development. For details of the course, see the announcement for the School of Military Science and Physical Culture. For the extent to which this course is repuired, see the announcement of the School of Military Science and Physical Training.

NOTE.—Credit will be given in the regular courses for all these courses, except Physical Culture, when taken where elections are allowed.

PREPARATORY DEPARTMENT.

The Preparatory Department is maintained to prepare students for the various regular University courses. Students entering this department must take the studies that are required for admission to these courses. Those who do not expect to enter a University course will be given the Preparatory Course, if they are able to take it, and will take it regularly.

The control of this Department is vested in a Preparatory Faculty, consisting of the President and the Principal and his assistants, and all students in the Department are under the control of this Faculty so far as their work is in the Department. All matters of discipline involving suspension or expulsion from the University are determined by the University Faculty.

Admission.

For admission to this Department, students should be proficient in the studies making up the ordinary course in the common schools of the State, and especially in English grammar and arithmetic. But no special examination is required for entrance unless the student wishes to take advanced standing. He is admitted on trial, and, if he can not pursue the course successfully, he is, after sufficient time to prove that fact, required to withdraw.

Students upon entering, will be assigned to such classes and sections of the course as they are qualified for, and will be advanced to higher classes and sections as fast as they acquire sufficient proficiency, till the course is finished. They will not be permitted to enter any higher class or section till they have passed in the lower, or shown by special examination that they have the required degree of proficiency.

The work in this Department is so arranged as to enable students to take the course in the shortest time consistent with the attainment of the required proficiency. Students who upon entering can take advanced standing, and who are capable of making good progress, may finish the course in one year. Where they do not lack much of the course, they may even finish it in one or two terms. Students who must take the course from the beginning, and who can not make rapid progress, may find it necessary to give two years, or even more, to the work of the department.

Course of Study.

The course of study in this Department is based upon the following general outline:

English.

Junior Section: English Grammar—Swinton—5 hours a week, half the year. Analysis—Reed & Kellogg—5 hours a week, half the year.

Senior Section: Elements of English—Chittenden—5 hours a week, half the year. Composition—Williams—5 hours a week, half the year.

Ability to analyze and parse English sentences correctly, and to apply the rules for orthography, the use of capitals, punctuation, invention, &c., in ordinary composition, is the standard required.

Mathematics.

Junior Section: Arithmetic—Greenleaf—5 hours a week, half the year. Algebra—Milne—5 hours a week, half the year.

Senior Section: Algebra—Wells' University—5 hours a week, half the year. Plane Geometry—Wells'—5 hours a week, half the year.

Proficiency in Algebra to Logarithms or Theory Equations and in Plane Geometry is the standard required.

Latin.

Junior Section: Latin Lessons—Chase and Stuart—5 hours a week throughout the year.

Senior Section: Reading, from Cæsar, Cicero and Vergil, with constant drill in forms and exercise-writing, 5 hours a week throughout the year.

Ability to read ordinary Latin prose and poetry, to explain grammatical forms and give rules for ordinary Latin constructions, and to apply the rules for forms and constructions in writing ordinary Latin prose exercises, is the standard required.

The time required to complete this course depends upon the standing taken upon entrance, and the diligence used and the progress made afterwards.

Students must make the required standing in the Junior Section of each study before they can be admitted to the Senior Section, and they must make the required standing in the Senior Section in each study before they can be admitted to University classes in the same study.

The schedule of recitations will be arranged when the classes are formed.

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The West Virginia Agricultural Experiment Station, in accordance with the provisions of the Act of Congress establishing, it is organized in connection with the W. Va. University. The State of West Virginia makes no appropriation for the support of this institution and never has. The University assigned it a building which has been enlarged and elaborately equipped for the purposes of an Agricultural Experiment Station, at station expense. It is provided with chemical, botanical, microscopical and etomological laboratories, each of which is provided with elaborate supplies of the most modern and approved apparatus for carrying on scientific investigations. In addition to the laboratories the building has proper officers for executive and clerical work and arrangements for preserving its collections and the results of scientific work conducted at the station, together with a valuable library.

The objects of the station are stated as follows in the Act establishing it:

Section 2. "That it shall be the object and duty of said Experiment Station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same, the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test the comparative effects of crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestiblity of the different kinds of food for domestic animals; the scientfic and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

The State publishes the result of the scientific investigations in

the bulletins and annual reports of the Experiment Station, whic are distributed free of charge to farmers and other citizens of th State desiring them. The mailing list of the Station is over 31,00 names. The Station, during the past year, has devoted a large shar of its energies to the study of the insect pests, and has made strenu ous efforts to check the destruction of our extensive pine forests which is going on so rapidly. All the fertilizers sold in the Stat are analyzed at the Station, and a large amount of horticultura work has been lately undertaken, together with a great variety o other investigations bearing directly upon the Agricultural develop ment of the State. The staff of the Station also conducts a very extensive correspondence with the farmers of the State upon subjects in which they are immediately and personally interested. The Staff also assists in all farmers' institutes held in the State, and attends all farmers' meetings to which it is invited. The Experiment Station is endeavoring loyally and faithfully to carry out the objects for which it was organized, and should prove a great blessing to the farmers of the State.

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seed, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators, must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

STUDENTS.

Graduates, Session 1892-3.

Bachelor of Arts

W. A. Burdette.
W. J. Eddy.
Lulu Garlow.
C. W. Gore.
S. W. Graham.
Lilian M. Hackney.
E. T. Hartman.
W. C. Meyer.
Sarah L. Norris.
A. H. Sheppard
A. B. Smith.
Altha Warman.

Bachelor of Science.

Braxton Davenport.

Bachelor of Science in Civil Engineering.

F. M. Minshall.

Bachelor of Agriculture.

C E.

Bachelor of Laws.

C. M. Alderson.
B. W. Chambers.
O. J. Chambers.
W. G. Conley.
S. H. Day.
C. N. Finnell
S. F. Glasscock.
J. G. Gorman.
M. LeMasters.
C. R. Martin.
R. E. Talbott.
B. E. Warne.
Z. F. Yost.

Register 1893-94.

Name.	P. O. Address.
Allemong, W. B	West Liberty.
Allen, E. F	Montgomery.
Alderson, Geo	Alderson.
Alexander, L. C	Frazier's Bottom.
Alexander, C. B	Charles Town.
Allen, R. E. L	Lima.
Annan, W. D. R	Newburg.
Brooks, E. A	French Creek.
Bruner, W. J	Wheeling.
Bambrick, W. C	New Cumberland.
Barlow, C. A	Beverly.
Brand, Miss Willa	Morgantown.
Bernhardt, Miss Tillie	Morgantown.
Barb, C. D	Maidsville.
Baker, J. T	Elkhorn.
Beall, C. H	Morgantown.
Boyd, A. E	Uniontown, Pa.
Boyd, S. P	Uniontown, Pa.
Berry, B. W	Wheeling.
Bland, G. W	West Union.
Brownfield, G. H	Fairmont.
Babb, Macker	Meuley.
Baker, W. E	Beverly.
Bowles, L. B	Milton.
Baker, Miss Lieu	Morgantown.
Brown, Martin	Halleck.
Brown, J. M. G	Morgantown.
Boyd, W. T	Alaska.
Cramer, C. W	Piedmont.
Cooper, J. T	Parkersburg.
Cole, H. O	Seven Pines.
Carmack, A. B	Brownsville, Pa.
Carrigan, C. E	Sherrard.
Cutright, W. B	Buckhannon.
Cracraft, W. A	Elm Grove.
Collins, J. H	Uniontown, Pa.
Carr, P. H	Zanesville, O.
Clay, J. M	Gilkeson.
Clark, C. L	New Martinsville.
Cunningham, J. R	Hazlewood, Pa.
Colebank, J. L	Stewartstown.
Colebank, O. O	Stewartstown.
Davisson, C. E	Mt. Clare.
Dolan, P. H	Benwood.
Dorsey, G. F	Morgantown.
Dille, T. R	Morgantown.
Davis, F. A	Morgantown.
Dorsey, L. T	Morgantown.

Name.	P. O. Address.
Bowney, F. L.	Bunker Hill.
Davis, S. R.	Laurel Point.
Dudding, J	Winfield.
Davenport, H. B	Charles Town.
Duncan, H. C	Kenova.
Day, Mrs. S. H.	Morgantown.
Dean, Wm	Morgantown.
Deffenbaugh, Walter	Smithfield, Pa.
Eaton, H. A	Charleston.
Eddy, Alex	Cross Roads.
Evans, James	Morgantown.
Elliott, C. S.	Redstone, Pa.
Fowler, O. S.	Fairview.
Friend, L. L.	Morgantown.
Fleming, H.	Webster.
Frey, S. C.	Morgantown.
Fields, James H	Smithfield, Pa.
Gorman, Roger	Morgantown.
Grant, Dale	Morgantown.
Gorman, M. E	Morgantown.
Gregg, Roma	Morgantown.
Goodwin, C. A.	Morgantown.
Galford, J. E.	Walkersville.
Garvin, C. E	Wheeling.
Green, E. H	Grass Lick.
Greynolds, Lew	Beverly.
Henry, W. E	Laurel Point.
Hood, O. A	Arthur.
Haught, T. W	Conaway.
Hagans, Miss Bessie	Morgantown
Haught, O. L.	Silver Hill.
Hess, H. C	Laurel Point.
Henderson, J. L	Morgantown.
Higginbotham, R. H	Charles Town
Hamrick, Troy	Philippi.
Holden, W. J	Craigmoor.
Hall, C. B	Morgantown.
Hughes, J. W	Glenville.
Hoff, S. M	Auburn.
Hall, B. H	Fairmont.
Hartmeyer, C.	Bruceton Mills.
Hitchens, C. P	Morgantown.
Halsted, S	Kesler's X Lanes.
Hackney, Miss Lillian	Morgantown.
Hawkins, Fay	Morgantown.
Hagan, J. R.	Uniontown, Pa.
Howe, Miss Rose	Morgantown.
Hanes, B. E.	Deep Valley.
Hendrickson, R. R.	Seymoursville.
Hendrickson, L. S	Seymoursville.
Holland, W. F	Randall.
Ice, W. T	Philippi.
Irelan, A. J	Morgantown.
Johnson, J. M	Long Reach.
Jones, C. R	Knottsville.
Jamison, G. W.	Morgantown.
Jolliffe, C. F.	Uniontown, W. Va.
Johnson, T. C.	Long Reach.
Jacob, S. S	West Liberty.
Jaco, L. M.	Morgantown.
Johnson, G. W.	Leetown.

Name.	P. O. Address.
Jenkins, S. R	Grafton.
Jacobs, Charles	Charleston.
Jamison, J. H.	Morgantown.
Krebs, C. E.	New Martinsville.
Konrad, Philip	New Martinsville.
Kunst, G. H. A	Pruntytown.
Knutti, J. G	Alpena.
Kunkle, Miss Josie	Morgantown.
Kinkaid, D. B	Knottsville.
Klotz, C. L	Bellaire, Ohio.
Kilmer, W. C	Martinsburg.
Knox, R. J.	Uniontown, Pa.
Kittle, W. B	Philippi,
Kunkle, J. M	Morgantown.
Keely, Josiah	Charleston.
Lazier, H. B., Jr	Morgantown.
Lewellyn, Lee	Morgantown.
Leps, H. M	Morgantown.
Lazear, J. H	West Liberty.
Langfitt, J. V	Eagle Mills.
Lavelle, T. M.	Uniontown, W. Va
Longanecker, J. C.	Morgantown.
Lawhead, B. M	Morgantown.
Linn, J H.	Uniontown, Pa.
Lowenstein, Isaac	Charleston.
Moore, Frederick	Belington.
Midelburg, Ferd	Charleston.
Madagan, Miss Mary C	Morgantown.
Moore, B G,	Procter.
May, C. W	Griffithsville.
Madagan, W. C	Morgantown.
McBee, P. C	Halleck.
Montgomery, H. C	Montgomery.
McClung, J. W	Ronceverte.
McDonald, Wm.	Windom
Martin, H. M	Shinnston.
Miller, F. S	Morgantown.
McCoy, C. E	Buffalo.
McWhorter, J. C	Berlin.
Moreland, Miss Nellie	Morgantown.
Morris, R. L	Huntington.
McDonald, J. T	Mann.
Martin, P. B	Hering.
Moore, B. W., Jr	Montgomery.
Meredith, J. H	Fairmont.
McKellar, G. W	Wheeling.
Naret, E. L	Buffalo.
Naret, W. F.	Buffalo.
Naret, Miss Barbara	Buffalo.
Noll, A. B	Martinsburg.
Nuzum, John	Garfield.
Nowlan, E. S	Stock Yards.
Nelson, J. F	Capon Bridge.
Nuzum, C. A	Grafton.
Orr, J. M	Kingwood.
Palmer, H. E	Huntington.
Protzman, Miss Blanche	Morgantown.
Protzman, J. B	Morgantown.
Pearcy, E. M	Normantown.
Payne, J. B	Philippi.
Post, S. H	Romine's Mills.

Name.	P. O. Address.
atton, W. T	Charleston.
ack, Rufus	Kiahsville.
oe, C. J	Buckhannon.
aul, J. W	Monongah.
atton, H. W	Moundsville.
ancake, W. A	Romney.
tobb, L. J	New Cumberland.
Ridgway, C. N	Maidsville.
Russell, B. W.	Morgantown.
Reay, D. C	Morgantown.
Reynolds, Miss Ethel	Morgantown.
Ropp, W. D	Spring Mills.
Reichard, L. N	Brownsville, Pa.
Romine, A. P	Johnstown.
Reynolds, Miss Mable	Morgantown.
Rader, A. F	Enon.
Ramsay, R. H	Clarksburg.
Renner, Luther	Hall,s Mills.
Rau, W. F	Bolivar.
Rich, H. B	Flickersville.
Reynolds, E. B	Keyser,
Standiford, W. R	Elm Grove.
St. Clair, Harry	Stewartstown.
Sanders, J. C	Maidsville.
Sawyers, W. H	Dawson.
Scott, B. F	Terra Alta.
Strader, J. F	Beverly.
Stiles, T. S	Cross Roads.
South, Miss Winifred	Morgantown.
Snyder, L. C	Laurel Point.
Sample, C. W	Randall.
Stout, W. F	Bridgeport.
South, W. H	Morgantown
Steed, H. A	Newark.
Summers, P. M	Clay C. H.
Stathers, S. C	Wheeling.
Summerville, H. A	Elizabeth.
Smith, H F.	West Milford.
Scott, G. B	Beverly.
Stewart, W. E	Morgantown.
Shaw. Harry	Colfax.
Shinn, H H	Central.
Tait, A. G	Randall.
Taylor, L. R	Wadestown.
Toudy, H F	Fleming.
Tompkins, T. S	Charleston.
Thompson, H	Laurel Point.
Utt, D	Morgantown.
Vangilder, Miss Lida	Morgantown.
Venable, W. W	Charleston.
Wilson, R. M	Charleston.
Wotring, F. H	Morgantown.
Wharton, W. L	Randall.
Willey, W. T	Morgantown.
Waddell, C. H	Wheeling.
White, Miss Anna B	Morgantown.
White, Miss Stella S	Morgantown.
Walker, L. A	Indian Mills
White, B. S	Morgantown.
Whitescarver, E. M	Pruntytown.
Whitescarver, J. S	Pruntytown.

Name.	P. O. Address.
Wilson, Creed	Pennsboro.
Willey, G. R. C.	Morgantown.
White H. M.	Camden.
White, Kemble	Belton.
Watson, Miss May	Morgantown.
Wiles, J. W.	Morgantown.
Wile , Mrs. L. R.	Morgantown
Watson, T. F.	Morgantown.
White, W. J.	Morgantown.
Wood, E. L.	Huntington.
Waters, L. V.	Morgantown.
Wilson, Claude	Scrafford
Yoho, Robert	Roseby's Rock.
Total	244.

Largest enrollment heretofore (1892-3) 228

SUMMARIES.

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1. By Schools.

English.

Preparatory	47
1. Collegiate	50
2. "	24
3. "	15
4. "	15

Mathematics.

Preparatory	101
1 Collegiate	33
2. "	9
3. "	3

Ancient Languages.

Preparatory Latin	75
" Greek	7
1. Collegiate Latin	17
2. " "	3
1. " Greek	13
2. " "	5

Modern Languages.

1. French	46
2. "	5
1. German	30
2. "	2

Chemistry and Physics.

General Physics	46
Advanced "	17
General Chemistry	60
Analytical Chemistry	10

Biology.

Physiology	44
Anatomy	12
Zoology	4
Field Botany	28
Structural Botany	3

Geology.

General Geology	16
Economic Geology	4
Mineralgy	5
Physical Geography	5

Metaphysics and Political Science.

Elementary Metphysics	43
Advanced Metaphysics	24
History and Science of Government	19
Economics	11

Civil Engineering.

In all classes, including drawing	47

Mechanical Engineering.

In all classes	22

Agriculture and Horticulture.

In all classes	10

Law.

Full course	41
Partial Course	6

Military Science.

(See Roster of Cadets.)

Special Courses.

1. Pedagogy	21
2. Book-keeping and Com. Law	23
3 Anatomy	12
4. Physical Culture	

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2. By States.

West Virginia	230
Pennsylvania	12
Ohio	2

3. By Counties in West Virginia.

Barbour	5	Marshall	5
Berkeley	4	Mineral	4
Cabell	4	Monongalia	85
Clay	1	Monroe	1
Doddridge	4	McDowell	1
Fayette	3	Nicholas	2
Gilmer	2	Ohio	11
Grant	4	Preston	5
Greenbrier	2	Putnam	6
Hampshire	2	Randolph	6
Hancock	3	Ritchie	2
Harrison	8	Summers	2
Jackson	2	Taylor	8
Jefferson	5	Tyler	4
Kanawha	9	Upshur	3
Lewis	3	Wayne	4
Lincoln	1	Wetzel	8
Logan	1	Wirt	2
Marion	7	Wood	1

4. By Sex.

Males	224
Females	20

Schedule.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:30	Book Keeping. 1 French. 1 M. & P. Sci. 4 Greek.	2 English. 2 M. & P. Sci. 3 German.	Book Keeping. 1 French. 1 M. & P. Sci. 4 Greek.	2 English. 2 M. & P. Sci. 3 German.	Book Keeping. 1 French. 1 M. & P. Sci. 4 Greek.
9:30	Chem & Phys. 1 Geology. 4 Lat. 3 Grk. 2 Biography.	Chem. &. Phys. 1 Biology. 4 Lat. 3 Grk. 2 Geology. 6 English.	Chem. & Phys. 1 Geology. 4 Lat. 3 Grk. 2 Biology.	Chem. & Phys. 1 Biology. 4 Lat. 6 Grk. 2 Geology. 6 English.	Chem. & Phys. 1 Geology. 4 Lat. 3 Grk. 2 Biology. .....
10:30	2 Lat. 1 Grk. 3 Math. 3 English 2 German. 3 M & P. Sci.	2 Lat. 1 Grk. An. Chem 3 French. 4 M. & P. Sci. 4 Math.	2 Lat 1 Grk. 3 Math. 3 English. 2 German. 3 M. & P. Sci.	2 Lat. 1 Grk. An Chem. 3 French. 4 M & P. Sci. 4 Math.	2 Lat. 1 Grk. 3 Math. 3 English, 2 German. 3 M. & P. Sci.
11:30	2 Math. 3 Lat. 2 Grk. 2 French. 5 English.	2 Math. 3 Lat 2 Grk. An. Chem. 1 German. 4 English.	2 Math. 3 Lat. 2 Grk. 2 French. 5 English.	2 Math. 3 Lat 2 Grk. An. Chem. 1 German. 4 English	2 Math. 3 Lat. 2 Grk 2 French. 5 English. .....
2:00	Pedagogics. Prac. Phys.	Pedagogics. Drawing.	Pedogogics. 1 German. Prac. Phys.	Pedagogics. Drawing.	Pedagogics. ....

The Professors of Law, C. E. M. E., and Ag. prepare the schedule for their own work. Consult them in regard to hours.

The hours for the classes in Special Anatomy, Advanced Geology, and, perhaps, of other special and elective studies, will be fixed by the professors in charge.

The Schedule for the Preparatory Department is made up when the classes are formed.

CATALOGUE

WEST VIRGINIA UNIVERSITY

1894--5

MOSES W. DONNALLY, PRINTER AND STATIONER, CHARLESTON, W. VA.

BUILDINGS AND GROUNDS.

CATALOGUE

WEST VIRGINIA UNIVERSITY

1894--5

NOYES W. DONNALLY, PRINTER AND STATIONER, CHARLESTON, W. VA.

University Calendar.

The University year consists of three terms, beginning for the year 1895–6, respectively, as follows: Fall Term, Wednesday September 11, 1895; Winter Term, Friday, January 3, 1896; Spring Term, Wednesday, April 1, 1896.

1895.

May 31st—June 8th—Final Examinations.

June 9th—Sunday, 11 A. M.—Baccalaureate Sermon, by Rev. G. B. Foster, Ph. D., of the University of Chicago.

June 10th—Monday, 8 P. M.—Regents' Prize Declamation.

June 11th—Tuesday, 8 P. M.—Annual Contest between the Literary Societies.

June 12th—Wednesday, 10 A. M.—Annual Commencement.

Vacation.

September 11th—Wednesday, 8:15 A. M.—Fall Term begins.

November 27th—Wednesday, 1 P. M.—Thanksgiving Recess begins.

December 2nd—Monday, 8:15 A. M.—Exercises resumed.

December 13th—21st—Fall Term Examinations.

Vacation till January 3, 1896.

1896.

January 3rd—Friday, 8:15 A. M.—Winter Term begins.

February 22nd—Saturday—Washington's Birth-day.

March 16th—24th—Winter Term Examinations.

Recess.

April 1st—Wednesday, 8:15 A. M.—Spring Term begins.

May 29th—June 6th—Final Examinations.

June 10th—Commencement.

Board of Regents.

1	J. B. Sommerville	Wheeling.
2	Clarence L. Smith	Fairmont.
3	John Bassel	Clarksburg.
4	J. Scott Withers	Glenville.
5	J. M. Holswade	Spencer.
6	Jas. H. Stewart	Raymond City.
7	Vacancy.	
8	Vacancy.	
9	Jas. F. Brown	Charleston.
10	T. J. Farnsworth	Buckhannon.
11	Joseph Moreland	Morgantown.
12	John A. Robinson	Patterson's Depot.
13	W. W. Brown	Kabletown.

Note.—According to a recent act of the Legislature, a new Board, consisting of nine members, goes into office June 1, 1895, viz.:

FOR TWO YEARS:

S. F. Reed, Clarksburg. E. P. Rucker, Welch.
W. E. Haymond, Sutton.

FOR FOUR YEARS:

C. B. Hart, Wheeling. Jas. H. Stewart, Raymond City.
Jas. F. Brown, Charleston.

FOR SIX YEARS.

Jno. A. Robinson, Patterson's Depot. C. L. Smith, Fairmont.
Geo. F. Evans, Martinsburg.

Officers of the Board.

John A. Robinson ..... President.
A. R. Whitehill ..... Treasurer.
S. B. Brown ..... Secretary.
Jos. Moreland ..... Auditor.
Jno. A. Myers ..... Sup't of Buildings and Grounds.

Executive Committee.

John A. Robinson, *Chairman.*

John Bassel ..... C. L. Smith.
T. J. Farnsworth ..... Jos. Moreland.

W. P. Willey, *Secretary.*

Experiment Station Committee.

John A. Robinson, *Chairman.*

C. L. Smith ..... J. S. Withers.
Jas. H. Stewart ..... W. W. Brown.

Faculty of West Virginia University—1895-'96.

J. L. Goodknight, D. D., President,
Professor of Political Science.

P. B. Reynolds, D. D., Vice President,
Professor of Metaphysics.

John I. Harvey, A. M. Ph. D.,
Professor of Modern Languages.

Judge Okey Johnson,
Dean of the Law Department.

St. George T. Brooke, LL. D.,
Professor of Common and Statute Law.

William P. Willey, A. M.,
Professor of Equity and Jurisprudence.

Alex. R. Whitehill, Ph. D.,
Professor of Chemistry and Physics.

James W. Hartigan, A. M., M. D., F. S. S., F. R. M. S.,
Professor of Biology and Director of the Gymnasium.

John L. Johnston, C. E.,
Professor of Civil and Mining Engineering.

Samuel B. Brown, A. M.,
Professor of Geology and Secretary to the Board of Regents.

John A. Myers, Ph. D.,
Director of the Experiment Station.

Robert A. Armstrong, A. M.,
Professor of English and Secretary to the Faculty.

Thos. C. Miller, A. M.,
Professor of Pedagogy and Principal of the Preparatory Department.

F. Wm. Rane, B. Agr., M. S.,
Professor of Agriculture and Horticulture.

William S. Aldrich, M. E.,
Professor of Mechanical Engineering and Director of the Department of Mechanic Arts.

James S. Stewart, M. S.,
Professor of Mathematics.

R. W. Douthat, A. M., Ph. D.,
Professor of Ancient Languages.

Capt. C. C. Hewett, 19th Inf. U. S. A.,
Professor of Military Science and Tactics. Recommended to the War Department for Appointment.

A. J. Hare, A. B.,
Assistant in Ancient Languages, English and Mathematics.

Russell L. Morris, C. E.,
Asisstant in Civil and Mining Engineering.

W. Bernard Cutright, A. B.,
Assistant in Preparatory Department.

C. R. Jones, C. E.,
Assistant in Mechanical Engineering.

Dennis M. Willis,
Assistant in Preparatory Department and Private Secretary to the President.

Waitman T. Barbe, B. S.,
Travelling Agent for the University.

Clara Hough,
Librarian.

FACULTY.

....PRESIDENT,
Professor of Political Science.

P. B. REYNOLDS, D. D., ACTING PRESIDENT,
Professor of Metaphysics.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

WILLIAM P. WILLEY, A. M.,
Professor of Equity and Jurisprudence.

ALEX. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., F. S. S., F. R. M. S.,
Professor of Biology and Director of the Gymnasium.

.....
Professor of Civil and Mining Engineering.

JOHN L. JOHNSTON, C. E.,
Professor of Applied Mathematics and Drawing and Acting Professor of Civil and Mining Engineering.

FIRST LIEUTENANT, F. DE W. RAMSEY, 14TH INF., U. S. A.,
Professor of Military Science and Tactics.

SAMUEL B. BROWN, A. M.,
Professor of Geology.

JOHN A. MYERS, PH. D.,
Director of the Experiment Station.

BERNARD C. ALDERSON, A. M., Secretary,
Professor of Ancient Languages.

ROBERT A. ARMSTRONG, A. M.,
Professor of English.

THOS. C. MILLER, A. M.,
Professor of Pedagogy and Principal of the Preparatory Department.

F. WM. RANE, B. AGR., M. S.,

Professor of Agriculture and Horticulture.

WILLIAM S. ALDRICH, M. E.,

Professor of Mechanical Engineering and Director of the Department of Mechanic Arts.

JAMES S. STEWART, M. S.,
Professor of Mathematics.

A. J. HARE, A. B.,
Assistant in Ancient Languages, English and Mathematics.

CLARA HOUGH,
Librarian.

Agricultural Experiment Station.

OFFICIAL STAFF.

JOHN A. MYERS, PH. D. ..... Director.
F. WM. RANE, M. S. ..... Horticulturist and Microscopist.
RUDOLPH D. ROODE, PH. D. * ..... Chemist.
BERT H. HITE, M. S. † ..... Chemist.
A. D. HOPKINS, PH. D. ..... Entomologist.
G. W. GRAY, A. B. † ..... Assistant Chemist.
W. E. RUMSEY, B. AGR. ..... Assistant Entomologist.
M. ELIZABETH HEERMANS ..... Stenographer and Book-Keeper.

* Resigned February 1, 1895.
† Since February 1, 1895.

UNIVERSITY HALL

THE UNIVERSITY.

Origin.

The West Virginia University was established by act of the Legislature, February 2, 1867. It was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Script," donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each state of an Agricultural College, were given to the College, and constitute a part of the endowment fund. By subsequent act of the Legislature, the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of the work.

Location.

The location of University is pleasant, beautiful and accessible. The community is thrifty, moral and cultivated—as much so as that of any other town of the same size in this or any other State. There are no saloons. The town has the advantage of water works—pure, soft mountain water—natural gas and electric lights. Morgantown is on the Fairmont, Morgantown and Pittsburg Railroad, connecting it southward at Fairmont and Grafton with all railroad lines running through the State, and northward with Pennsylvania routes. Daily packets run from Pittsburg to Morgantown on the Monongahela river.

PLANT.

1. Grounds.

The University grounds, about eighteen acres in extent, occupy an elevated and healthful position overlooking the Monongahela river, and command a beautiful view of the surrounding country. They afford a well improved campus, sites and surroundings for the various buildings, grounds for the military drill and out-door athletics, drives, groves, &c.

2. Buildings.

The principal buildings are six in number, all of brick, and four of them new. They are admirably adapted to their purposes, and have cost, with their equipment, more than $250,000. They are the following:

(1). Two large buildings, of three stories and a basement each, for class rooms, Library, Biological Department, Museum, Society Halls, Offices, &c.

(2). A Scientific Building, finished and equipped in the summer of 1893, affording lecture rooms, laboratories, &c., for the departments of Chemistry and Physics, Geology, Civil Engineering and Art.

(3). A Mechanical Hall, affording shops, machinery, appliances, &c., for instruction in Mechanical Engineering and the Mechanic Arts. An addition has been made to this building this year that doubles its capacity. The machinery cost from $30,000 to $40,000.

(4). An Auditorium, furnishing room for a commodious and beautiful Chapel and Commencement Hall, an Armory and Drill Hall and a Gymnasium.

(5). An Agricultural Experiment Station, which, although not a part of the University proper, forms, with its libraries, laboratories, and other equipments, an invaluable adjunct to the University. This building has just been remodelled and doubled in extent, and is one of the handsomest and best equipped Experiment Stations in the United States.

COMMENCEMENT HALL.

3. Equipment.

The Apparatus for instruction in Civil and Mining and Mechanical Engineering, Chemistry and Physics, Biology and Geology, is mostly entirely new, has been made to order, and is pronounced by experts to be equal to the best in the country. The Apparatus for the various other departments is being constantly increased and improved.

The Library contains standard works in all departments of literature, books of reference needed in all branches of work in the University, and a Reading Room furnished with the best papers and magazines. Large additions are made to the Library every year.

A Gymnasium has been fitted up with the best modern appliances, is under the management of a competent director, and is amply provided with all the facilities for exercise and physical development.

The Experiment Station has no organic connection with the University, but its able director and staff, its equipment, its chemical, botanical, entomological, horticultural and agricultural work and experiments should be reckoned among the facilities for education at the University.

Funds for maintaining the University are derived from the interest on an endowment of about $110,000, from biennial appropriations made by the State Legislature, and from the "Morrill Fund," appropriated by act of Congress of August 30, 1890, for the further endowment of Agricultural Colleges, from which the University receives this year, after deducting the amount that goes to the support of the State Institute for colored youth, the sum of $17,000, and which will yield $20,000 per year for University support in four more years.

REQUIREMENTS.

1. Admission.

In order to be admitted to any course in the Collegiate Department, the candidate must stand a satisfactory examination in the studies preparatory to such course, or otherwise give sufficient evidence of the necessary proficiency in them.

Graduates of the Academic Department of the Normal School or any of its branches, or from approved High Schools and Academies, are admitted to Collegiate courses without examination, upon presentation of a proper certificate of such graduation.

Students who wish to take "advanced standing" in college courses upon credit for work done elsewhere, must apply to the Faculty for permission to take such standing, and then must satisfy the professors in whose course they wish credit given, by examination or otherwise, that they have done the work required in these courses or a full equivalent therefor.

To matriculate, a candidate must get from the President a written permit to enter; must be admitted to the required number of classes and have the certificate of professors that he is so admitted; must have the Treasurer's receipt for the payment of all dues and must be enrolled by the Secretary.

Matriculation is equivalent to a pledge to obey the rules and regulations of the University, and it will be so construed and the matriculate required to fulfill it.

At the beginning of each term, the student must obtain the Treasurer's receipt for all fees payable that term, and be enrolled by the Secretary for that term, before he will be allowed to go on with his studies.

Students must enroll immediately upon their arrival at the University, and re-enroll promptly at the beginning of the terms, or give a satisfactory excuse for the delay.

Female students are admitted to the collegiate department under the same regulations as male students.

2. Work.

Students must select their studies so as to have not fewer than fourteen and not more than sixteen recitations per week, unless they have special permission to take a smaller or a larger amount ofwork.

Students must enter one of the regular courses, unless they are permitted for good reasons to take an irregular or special course.

Students must pursue the courses they have entered and remain in the classes in which they have been enrolled, until they are permitted by the Faculty to change or abandon their work.

3. Grades.

In order to be promoted from a lower to a higher class, or to get credit for having completed any subject in any course, students must make an average of 7 on a scale of 10 for each term given to the subject.

Grades are made up by an average of recitation and examination values, each counting one-half.

Examinations are held at the close of each term, and at such other times as professors may deem necessary. The time allowed for each examination is not less than three nor more than five hours. Upon failure to pass, a second examination will be granted only by special permission of the Faculty. Absence from examination will be excused only when proof is given that such absence is unavoidable. In case of an excused absence from examination, if the recitation value equals 8.50, the student will not be required to stand an examination.

All absences, from whatever cause, are counted against the student in making up his grade, except that he may be excused for absences in any class equal to one-tenth the exercises of that class for a term, upon presenting to the Faculty a sufficient reason for the absences, and making up the work done by the class while he was absent.

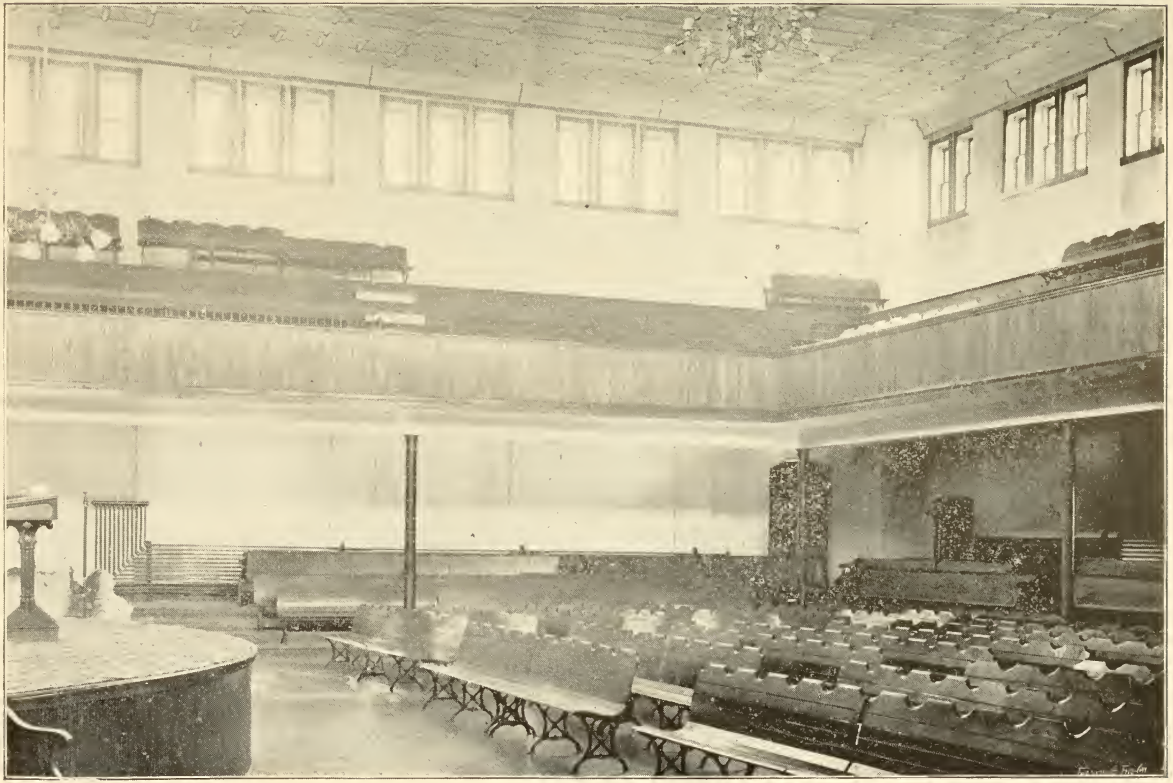
4. Discipline.

The rules and regulations which students are required to observe are few, simple and reasonable. Punctuality and regularity in attendance upon all required exercises, reasonable diligence in the performance of the work prescribed, abstinence from drinking, gambling and like gross vices, and civil, orderly conduct generally, are deemed sufficient, and are all that will be exacted. Students who can not, or will not, comply with these requirements will not

be allowed to remain in the University. Offenders will be warned, and will be given reasonable time to correct their conduct, and then, if they do not amend, they will be dismissed.

5. Religious Worship.

The daily work of the University is begun by short, appropriate religious exercises in the Chapel, upon which every student, unless specially excused, is required to attend. Students, unless excused, are also required to attend some Church at least once on the Sabbath. The different denominations have their churches, pastors and Sunday schools in the town, and these are means of good influence over the students. Students of age, and minors through their parents or guardians, are exempted from the above requirements, when they can give reasonable evidence that such requirements are against their conscientious convictions.



INTERIOR OF CHAPEL.

AUXILIARIES.

1. Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University departments, who shall write the best essay on a subject selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations :

1. The manuscript of each competitor shall be in his own handwriting.
2. Each essay shall have a fictitious signature, and be accompanied by a sealed letter containing both the fictitious and real name of the writer.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.
4. The successful competitor shall read his essay in public at such time as the Faculty may direct.

The Regents' Prize for declamation will be presented to any student whose studies are principally in the Preparatory Department, for the best declamation. The award is made by a committee appointed by the President of the Board of Regents.

2. Athletics.

Besides the regular course in Physical Training and optional Gymnasium courses, sufficient attention is given to and sufficient provision is made for Base Ball, Foot Ball, and other athletic sports, in both home and inter-collegiate exercises, to meet all the requirements for a due degree of physical development.

3. Library and Reading Room.

Students will find great advantage in using as extensively as possible the Library and Reading room. These are open every day in the week during University hours—8:30 to 12:00, and 2:00 to 5:00—and are free to all students who comply with the regulations. These regulations are posted in the Library and can be obtained of the Librarian.

4. Literary Societies.

There are, in connection with the University, two flourishing literary societies, the Parthenon and the Columbian. Each has a good hall handsomely furnished. The exercises in these societies, consisting of composition, readings, declamations, orations, debates and criticism, are invaluable to students. These societies have an annual contest, at some time in Commencement week, in declamation, essay, oration and debate, for prizes aggregating $100. Students are urged to connect themselves with one of these societies, and to perform faithfully all the work required of the members.

5. Engineering Society.

The object of this society is to encourage the investigation of, and facilitate an acquaintance with and mastery of, engineering topics. Its exercises, consisting of essays, discussions, original researches, etc., are of great value to students pursuing a course in engineering.

6. Y. M. C. A.

The Young Men's Christian Association is doing, successfully, an important work. It is in a flourishing condition and is very active. The Faculty recognize its great service in maintaining the discipline and a high standard of character in the University. It meets every Friday evening, from 6 to 7 o'clock, for devotional exercises and business. Students who are seeking the highest culture for themselves, should connect themselves with this association and engage actively in all its work. It also conducts a lecture course, securing for the University and community the best talent at very reasonable rates.

EXPENSES.

1. Tuition.

Tuition is free to West Virginia students in all departments. Students from other States are charged $12.50 per term in University Departments, and $5.00 per term in the Preparatory Department.

2. Fees.

The matriculation fee is $5.00, payable upon entering the University. It is paid but once. The contingent fee for each term is $2.00, payable at the beginning of the term. State cadets are exempted from these fees. The other fees are a laboratory fee of $2.00 for students in general chemistry; a fee of $5.00 for students in special anatomy, to cover cost of material used: a fee of $20.00 for students in analytical chemistry, to cover cost of materials, and a fee of $5.00 for a diploma upon graduation.

3. Board and Lodging.

Furnished rooms cost each student from 75 cents to $1.25 per week. The average is $1.00 per week. Students lodge with private families. Board, in students' clubs costs from $1.75 to $2.00 per week; in private families, from $2.00 to $3.00 per week.

4. Incidentals.

Lights, washing, text-books and incidentals cannot be correctly estimated, but will cost as little as at any other school of the same grade. State Cadets get their text-books and stationery free. Washing costs about $1.00 per month. The cost of incidentals depends largely upon the tastes and habits of the student.

5. Estimate.

Room rent	$27.00	to	$45.00
Board	63.00	"	90.00
Washing	9.00	"	13.00
Incidentals	20.00	"	20.00
Text-Books	8.00	"	30.00
Contingent fees	6.00	"	6.00
	$137.00	to	$204.00

To this must be added matriculation and tuition fees, in case they are required, traveling expenses, clothing, etc., etc.

Text-books are kept for sale at the University, and are furnished to students at cost.

ORGANIZATION.

The University is organized for instruction so as to comprise eight Academic Schools, five Technical and Professional Schools and four Special Courses. A synopsis of the work in these several schools and courses is given here. For a complete and detailed description, se the announcements of the several professors in another place.

1. ACADEMIC SCHOOLS.

I English.

Preparatory—Grammar, Composition and Elements of Rhetoric.
1. Elementary Rhetoric, Composition and Introduction to English Literature.
2. History and growth of the English Language and Literature.
3. Advanced Rhetoric and Rhetorical Analysis.
4. Literature and Literary Criticism.
5. Anglo-Saxon and English Philology.

II. Mathematics.

Preparatory—Arithmetic, Elemetary Algebra and Geometry.
1. Algebra, Geometry, Trigonometry and Analytical Geometry.
2. Calculus and Analytical Geometry.
3. Astronomy.

III. Ancient Languages.

Preparatory—Latin Grammar, Exercises and Reader.
1. Latin and Greek Grammar, Exercises and Reading.
2. A more advanced course in Latin and Greek Grammar, Exercises and Authors.
3. Special course in Latin and Literature and Philology.

IV. Modern Languages.

1. French and German Grammar Exercises and reading.
2. Advanced French and German Grammar, Exercises and Reading.
3. French and German Literature.

V. Chemistry and Physics.

1. General Chemistry and Physics.
2. Analytical Chemistry and Practical Physics.

VI. Biology.

1. Anatomy, Physiology and Field Botany.
2. Zoology and Structural Botany.
3. Advanced Human Anatomy.
4. Microscopy.

VII. Geology.

1. General, Stratagraphic and Economic Geology.
2. Mineralogy and Lithology.
3. Physical Geography.
4. Advanced Economic Geology.

VIII. Metaphysics and Political Science.

1. Elementary Psychology, Logic and Political Economy.
2. Advanced Psychology, Logic and Principles of Science and Ethics.
3. History and Political Science.
4. Advanced Political Economy.

2. Technical and Professional Schools.

I. Civil and Mining Engineering.
II. Mechanical Engineering and Mechanic Arts.
III. Agriculture and Horticulture.
IV. Law.
V. Military Science and Tactics.

3. Special Courses.

I. Book-keeping and Commercial Law.
II. Pedagogics.
III. Anatomy.
IV. Physical Culture.

NOTE.—Credit will be given in the regular courses for these courses, except Physical Culture, when taken where electives are allowed.

COURSES FOR DEGREES.

The University offers seven regular courses for degrees, as follows:

1. Bachelor of Arts.
2. Bachelor of Science.
3. Bachelor of Science in Civil Engineering.
4. Bachelor of Science in Mechanical Engineering.
5. Bachelor of Science in Agriculture.
6. Bachelor of Laws.
7. B. A. or B. S. in Law.

Students are admitted to any of these courses who have finished the required preparatory work, and who show that they are competent to pursue the studies included in the course. See detailed announcement of Preparatory Department for preparatory work in each course.

1. Bachelor of Arts.

This is a four years' course. It is devoted especially to English, Ancient Languages, Literature and Philosophy, with a fair proportion of Mathematics and Sciences, and room enough for electives to adapt it to the tastes and wants of the student.

1st year: 1 Eng. 2 hours, 1 Math. 3 hours, 1 Anc. Lang. 5 hours, 1 Chem. and Phys. 5 hours.
2nd year: 2 Eng. 3 hours, 2 Anc. Lan. 5 hours, 1 M. & P. Science, 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours.
3rd year: 3 Anc. Lang. 5 hours, 2 M. & P. Science, 2 hours, 3 & 4 Eng. 5 hours, 2 Biol. 3 hours.
4th year: Special Anc. Lang. 3 hours, 3 and 4 M. and P. Science, 5 hours, Electives 6 to 8 hours.

The preparatory work required for this course includes Eng. 5 hours, Math. 5 hours, Latin 5 hours for each year.

2. Bachelor of Science.

This is a four years' course. It is devoted especially to the Sciences, Mathematics and Modern Languages, with a fair proportion of English and electives.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, 1 Fr. 3 hours, 1 Chem. and Phys. 5 hours.

2nd year: 2 Fr. 3 hours, 1 M. and P. Science, 3 hours, 1 Biology 2 hours, 1 Geol. 3 hours, An. Chem. 2 hours, 2 Math. 3 hours.

3rd year: 3 Fr. and 1 Ger. 5 hours, 2 M. and P. Science 2 hours, 2 Biology 3 hours, 2 Geology, 2 hours, Prac. Phys. 2 hours, Elective 2 hours.

4th year: 3 Ger. 2 hours, 3 and 4 M. and P. Science 5 hours, Electives 7 to 9 hours.

The preparatory work required for this course includes Eng. 5 hours, Math, 5 hours, Latin 5 hours for each year.

3. Bachelcr of Science in Civil Engineering.

This is a four years' course, devoted to the subjects of Civil and Mining Engineering, with a collateral course in English, Mathematics, Modern Languages and Sciences.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, 1 Fr. 3 hours, 1 Chem. and Phys. 5 hours, Drawing, etc., 2 hours.

2nd year: 2 Math. 3 hours, 2 Fr. 3 hours, 1 M. and P. Sci. 3 hours, An. Chem. and Prac. Phys. 4 hours, C. E. work.

3rd year: 1 Ger. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, C. E. work.

4th year: 3 Math. 2 hours, 2 Geol. 2 hours, 2 Ger. 3 hours, C. E. work.

The preparatory work for this course includes Eng. 5 hours, Math. 5 hours; with drawing, etc., as assigned by the professor, for each year, 5 hours. A thesis is required for graduation.

4. Bachelor of Science in Mechanical Engineering.

This is a four years' course, devoted to the subjects of Mechanical and Electrical Engineering and Mechanic Arts, with a collateral course in English, Mathematics, Modern Languages and Sciences.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, 1 Fr. 3 hours, 1 Chem. & Phys. 5 hours, Drawing, &c., 2 hours.
2nd year: 2 Math. 3 hours, 2 Fr. 3 hours, 1 M. & P. Sci. 3 hours, An. Chem. & Prac. Phys. 4 hours, M. E. work.
3rd year: 1 Ger. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, M. E. work.
4th year: 3 Math. 2 hours, 2 Geol. 2 hours, 2 Ger. 3 hours, M. E. work.

The preparatory work for this course, includes Eng. 5 hours, Math. 5 hours, with Drawing, Shop Work, &c., as assigned by the Professor, 5 hours.

A thesis is required for graduation.

5. Bachelor of Science in Agriculture.

This is a four years' course, devoted to the subject of Agriculture, Horticulture, &c., with a collateral course in English, Mathematics and Sciences.

1st year: 1 Eng. 2 hours, 1 Math. 5 hours, B. K. 3 hours, 1 Chem. & Phys. 5 hours, Drawing, &c., 2 hours.
2nd year: 2 Eng. 3 hours, 1 M. & P. Sci. 3 hours, 1 Biol. 2 hours, 1 Geol. 3 hours, An. Chem. 2 hours, Ag. & Hort.
3rd year: 2 Biol. 3 hours, 2 Geol. 2 hours, Prac. Phys. 2 hours, Ag. & Hort.
4th year: 3 & 4 M. & P. Science 5 hours, Elect. 5 hours, Ag. & Hort.

The preparatory work for this course includes Eng. 5 hours, Math. 5 hours, with practical work as assigned by the Professor, for each year 5 hours.

6. Bachelor of Laws.

This is a two years' course, but a student with the requisite ability and industry may complete it in one year. It is devoted to such subjects as will prepare students for the successful practice of of law.

Junior: Blackstone, Rights of Persons, Rights of Things, Torts, Criminal Law, Statute Law, Constitutional Law, Contracts, Agency, Evidence, Sales
Senior: Common Law Pleading, Real Property, Negotiable Paper, Partnership, Suretyship and Guaranty, Evidence, Equity, Pleading and Practice, Bailments, Insurance, Corporations, Practice in the Courts.

7. B. A. or B. S. in Law.

This degree is given for the following University work :

1. The regular course in Law equal to 20 hours.
2. English studies equal to 10 hours.
3. Moral and Political Science equal to 10 hours.
4. Languages—Ancient or Modern, or both—equal to 10 hours.
5. Sciences or Mathematics, or both, equal to 10 hours.

For full information as to the preparatory work required for these several courses, consult the detailed announcement of the Preparatory Department in another place.

Students are advised, and expected, to take one of the regular courses. They will save time, and get more benefit by doing so, even if they do not finish the course.

Students who cannot take a regular course may, for good reasons, make up an irregular or special course of 15 hours per week from such subjects as do not conflict.

Students who can not take the regular course in C. E., M. E., or Agr., may, if prepared, enter one of these courses, and get a certificate showing the work done.

German may be substituted for Greek, where there is no conflict.

Students who have not fully completed the preparatory work may, however, enter a course by taking the preparatory work not finished and such part of the course as they may be qualified to pursue.

Post Graduate Courses.

A course of one year is given for each of the degrees of Master of Arts and Master of Science to students who have finished the B. A. and B. S. courses, respectively, upon application to the Faculty.

COURSES OF INSTRUCTION.

I. ACADEMIC SCHOOLS.

English.

Professor Armstrong.

Course I.

Rhetoric and Composition. 2 hours.

Tuesday and Thursday, 8:30.

Recitations—Prescribed Reading, Weekly Essays and daily writing of short Themes.

Text—Genung's Outlines of Rhetoric.

This course is intended primarily to give practice in composition; it will be made very practical.

Course II

English Language and Literature. 3 hours.

Monday, Wednesday and Friday, 10:30.

First Term—History and growth of the English Language.

Texts—Meiklejohn's History of the English Language, Skeat's Etymological Dictionary and Supplee's Trench on Words.

Second and Third Terms—Outline History of English and American Literature, and study of Masterpieces, Recitations, Re-

ports, Class Readings, Paraphrases, Abstracts and Prescribed Readings.

Texts—Shaw's History of English and American Literature, Swinton's Studies in Literature, and Critical Editions of English Classics.

Students in this course are required to follow a prescribed course of collateral reading, and to make weekly reports of progress.

Course III.

RHETORIC. 3 hours.

Tuesday and Thursday, 11:30.

Recitations, Essays, Analyses of Themes, Reports, Discussion of Themes presented, and daily class exercises in writing brief themes.

Texts: Genung's Rhetoric and Rhetorical Analysis.

Course IV.

ENGLISH LITERATURE AND LITERARY CRITICISM. 3 hrs.

Monday, Wednesday and Friday, 11:30.

Recitations, Reports, Reviews, Critiques, Lectures and Critical Readings in Class.

Texts—Minto's English Prose, Minto's English Poets, Hawthornes and Lemon's American Literature and Critical Editions of English and American Masterpieces.

A short course of collateral reading is prescribed and weekly reports of progress required.

Course V.

ANGLO-SAXON. ELECTIVE. 2 hours.

Tuesday and Thursday, 10:30.

Recitations, Class Readings, Prescribed Readings and Reports.

Texts—Cook's First Book in Old English, Sweet's Anglo-Saxon Reader and Library of Anglo-Saxon Poetry.

Course VI.

ENGLISH PHILOLOGY. *Elective.* 2 hours.

Wednesday and Friday, 9:30.

Recitations, Readings, discussions and Reports.

Texts—Gile's Manual of Philology, Peile's Philology, Skeat's

Primer of English Etymology, and Whitney's Language and the Study of Language.

Course VII.

The English Bible, Shakespeare and Bacon. 2 hours.

Tuesday and Thursday, 9:30.
The English Bible—The Literature of the Bible.

Bacon—Essays and Advancement of Learning. Study through critical reading, paraphrase, and amplification. Bacon's character, opinions, and style.

Shakespeare—Class Readings, Critiques, and Essays.

Plays Selected—A Midsummer Night's Dream, The Merchant of Venice, As You Like It, Twelfth Night, The Tempest, Henry II, Richard III, Hamlet, Macbeth, Othello, King Lear, and Julius Caesar.

To be admitted to course I., a student must be proficient in grammar and primary rhetoric. Course I and II may be taken contemporaneously; so also may courses III and IV. Courses I and II are requisite for admission to any of the higher courses. V, VI, and VII may be taken as electives.

Mathematics.

Prof. Stewart.

1. (A)—University Algebra, Solid Geometry, Trigonometry, Analytic Geometry.
   Five hours a week throughout the year.
   Fall Term.—Well's University Algebra, beginning at Logarithms, completed. (6 weeks.)
   Well's Solid Geometry, completed. (8 weeks.)
   Winter Term.—Trigonometry—Wentworth.
   Spring Term.—Analytic Geometry—Nichols.
   (B)—University Algebra, Solid Geometry, Trigonometry.
   Three hours a week throughout the year.
   Fall Term.—University Algebra and Geometry.
   Winter Term.—Well's Solid Geometry.
   Spring Term.—Trigonometry—Wentworth.

Before being admitted to course, (1) students will be required to pass examinations on Plane Geometry, and University Algebra to Logarithms or Theory of Equations, or to present satisfactory certificates of proficiency on these subjects.

Course (A) is for students taking the B. S., C. E., and M. E. Courses.

Course (B) is required of all students for the degree of A. B.

2.—ANALYTIC GEOMETRY AND CALCULUS.

Three hours a week throughout the year.

Fall Term.—Solid Analytic Geometry and Calculus. (Taylor.)

Winter Term.—Differential Calculus—Curve Tracing.

Spring Term.—Integral Calculus—Rectification of Curves.

Students are required to complete Course 1 before entering upon course 3.

3.—ASTRONOMY, DESCRIPTIVE AND MATHEMATICAL.

Two hours a week, Fall and Winter Terms.

Ancient Languages.

PROF. ALDERSON.

1. LATIN.

Fall Term.—Virgil's Eclogues and Georgics. Two hours a week.

Winter Term.—Horace's Odes. Three hours a week.

Spring Term.—Catullus. Two hours a week. Prose composition throughout the year.

2. LATIN.

Fall Term.—Livy. Two hours a week.

Winter Term.—Horace's Satires and Epistles. Three hours a week.

Spring Term.—Cicero's Letters. Two hours a week.

Practice in sight reading is given throughout the year.

3. LATIN. Two hours a week.

Fall Term.—Early Latin: Allen's Remnants and Merry's Fragments.

Winter Term.—Plautus.

Spring Term.—Juvenal.

Collateral reading and special study of Roman life and customs.

The requirements for admission to course 1 are: A thorough knowledge of the principles of Latin grammar; ability to write ordinary Latin prose; facility in reading such prose as that of Nepos, Cæsar and Cicero; and the reading of not less than two books of the Aeneid.

To students who have completed course 3 elective courses will be offered in Tacitus, Quintilian and Seneca.

4. GREEK.

Fall Term—Herodotus. Three hours a week.

Winter Term—Homer's Iliad. Two hours a week.

Spring Term—Homer's Odyssey. Three hours a week. Prose composition throughout the year.

5. GREEK.

Fall Term—Xenophon's Memorabilia. Three hours a week.

Winter Term—Plato's Apology and Crito. Two hours a week.

Spring Term—Aristophanes' Clouds. Three hours a week. Practice in sight reading.

6. GREEK. Two hours a week.

The Greek drama: Sophocles.

Euripides and Æschylus. Private reading.

The requirements for admission to course 4 are: familiarity with the grammar and accidence of the language; facility in reading such Attic prose as the Anabasis; and ability to write Attic prose.

To those who have completed course 6 additional courses will be offered in Demosthenes, Thucydides and Pindar.

Modern Languages.

PROF. HARVEY.

COURSE 1. FRENCH.—Three times a week.
Grammar and Easy Readings throughout the year.

COURSE 2. FRENCH.—Three times a week.
Selections from Modern Authors: Grammar and Exercises throughout the year.

COURSE 3. FRENCH.—Two times a week.
Selections from Classic Authors, Composition and Literature throughout the year.

COURSE 1. GERMAN.—Three times a week.
Grammar and Easy Readings throughout the year.

COURSE 2. GERMAN.—Three times a week.
Selections from Modern Authors, Grammar and Exercises throughout the year.

COURSE 3. GERMAN.—Two times a week.
Selections from Classic Authors, Composition and Literature throughout the year.

REMARKS.—As some language-training is pre-supposed, the student is advised to familiarize himself at least with the elements of Latin before applying for admission to any of the courses in this school.

In courses numbered 1, the student is drilled in the accidence of Grammar, and in 2 in Syntax, in addition to the careful translation into English of the Authors selected. In courses numbered 3, in addition to the class-room work, a parallel course in Reading will be prescribed at the beginning of each term and required on examination.

The object of the whole course is to lay a broad foundation for a practical working knowledge of the languages taught. Instruction is given by recitations on approved text-books and by familiar conversations.

Chemistry and Physics.

PROF. WHITEHILL.

1. GENERAL PHYSICS.

Three hours per week throughout the year are given to this course. The leading principles of Mechanics are studied during the Fall term. Magnetism, electricity and sound are studied during the Winter term, and heat and light during the Spring term. To enter this course the student must have a knowledge of Arithmetic, algebra, and at least three books of plane Geometry. Fully one-half of the time throughout the year is devoted to experimental work, and the student is taught not only the essential facts of the science, but also the value of the scientific method as a disciple.

2. ADVANCED PHYSICS.

This course includes two exercises per week throughout the year. The time for each exercise varies with the nature of the work to be performed. The course is open to students who have taken the first year's course in Physics in the University, or an equivalent course elsewhere, and who have sufficient mathematical knowledge for the investigation of subjects in higher Physics.

In connection with the theoretical work, practical work is undertaken in dynamics, sound, heat and light, and the elements of Electrical Engineering receive attention.

3. GENERAL CHEMISTRY.

Three hours per week throughout the year are given to this course. The subject is taught by the experimental and inductive method. The subjects presented are the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Allusion is constantly made to the applications of chemistry in medicine, pharmacy and the arts, and suggestions are given in

ONE OF THE CHEMICAL LABORATORIES.

he line of turning chemical knowledge to practical account. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

A knowledge of the branches required for entrance into the first year's course in Physics is also necessary for the successful completion of this course in Chemistry.

4. Analytical Chemistry.

Five hours per week throughout the year are given to this course. The students work in the laboratory under the guidance of the instructor.

Facilities are provided for systematic instruction in qualitative analysis and for general practice in experimental work. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different metals and acids are then made in turn, and unknown compounds are from time to time given to test the progress of the student in his work. During the Spring term an elementary course in quantitative analysis is given, and special attention is directed to the more important medical preparations, and to the analysis of water, coal and coke.

Students who have completed the first year's course in Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in any elementary work on the subject named.

5. Quantitative Analysis.

An extended course in Quantitative Analysis is offered, which includes both the gravimetric and volumetric methods. In this course exercises are given in determining the composition of ores, minerals, clays, coal, coke, potable and mineral waters, and various technical compounds. Instruction is also given in gas analysis, in the assaying of gold, silver and lead ores, and in the analysis of iron and steel. Members of the class have access to the laboratory at such times as may be ageeed upon, and in connection with the regular work are encouraged to undertake original research. Students who expect to teach Chemistry as well as those who expect to become professional chemists will find in this course unusual facilities for practical work.

Apparatus.

Students in the several classes have access to a large and valuable collection of Chemical and Physical apparatus, and the various

recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Atwood's Machine, Pelton's water motor, 4 Troemer balances, Jolly balance, Brush dynamo, 2 Ruhmkorff coils, Holtz and plate electrical machines, with accessories, Leyden and galvanic batteries, electrical testing sets, resistance coils, ampere and volt metres, galvanometers, Perret electric motors, Geissler, Crookes and Plucker tubes, telegraphic instruments, telephone, microscope, 2 spectroscopes, polariscope, colorimeter, heliostat, 2 air pumps with accessories, siren, sonometer, manometric flame apparatus, radiometer, optical lantern, plane, convex and concave mirrors, graphoscope, kaleidoscope, stereoscope, meteorological instruments, apparatus for electroplating and gas analysis, combustion furnaces, photographer's outfit, models, levers, planes, pulleys, pendulums, etc.

The method of instruction in this department is by text-books, lectures and experiments. In every course the theoretical work is supplemented by practical work in the laboratory.

During the present year the facilities for instruction in both Chemistry and Physics have been largely increased by the completion of the Scientific building, which is one of the most complete buildings of its kind in the country.

Biology.

PROFESSOR HARTIGAN.

1. FIELD BOTANY.

This class meets once a week throughout the year. The Fall and Winter terms are devoted to the study of the text, which is expanded by lectures from time to time, while the spring term is given to practical work in the analysis of flowers. Examinations are held at the end of each term, and in addition to the practical work in the class room and field, each student is required to prepare an herbarium of one hundred specimens. The text is Wood's Botanist and Florist. In analysis, Wood, and the Systems of Gray and Kellerman.

2. STRUCTURAL BOTANY.

One hour a week throughout the year is given to this subject. The Fall and Winter terms are given to the study of general plant Anatomy and Physiology; and the Winter term to the special consideration of these subjects, the student being instructed in the practical use of the microscope in the study of Plant Histology. Bessey's Structural Botany is the text used.

BIOLOGICAL LABORATORY.

For reference, Gray, Sachs, Crookshank's Bacteriology, Bentley, Cooke.

3. Zoology.

Two hours a week throughout the year are given to this subject. The Fall term is given to the study of Comparative Zoology. This part of the course is mainly by lectures. The Winter and Spring terms are devoted to the study of Systematic Zoology, Embryology and Histology. Students are instructed in the use of the microscope, and are required to use it in their investigations each day in the class-room. Members of this class are required to skeletonize five vertebrate animals, as practical work. The text is Orton's Zoology, with the works of Darwin, Haeckel, Spencer, Packard and Claus, for reference.

4. Physiology and Hygiene.

One hour a week throughout the year is given to this subject, (co-ordinated with Course 1.) The course is entirely by lectures, no special work being used as a text, though any standard work is recommended for collateral reading. Books recommended for reading are: Flint's Human Physiology, Yeo's Manual, Kirke, Dalton. In Hygiene—Huxley and Youmans, Wilson, Parks.

5. Human Anatomy.

Five hours a week throughout the year are given to this subject. The course is entirely by lectures, and is designed as a special course in this branch for those desiring to prosecute the study of Medicine and Surgery. The skeleton or cadaver will furnish the proper text for each lecture, though models, manikins, specimens and charts will be used when necessary to elucidate any special subject.

Students in this course are required to dissect three parts of the human body and to be examined thereon. The dissecting room is open each evening from 7 till 10 o'clock, and all members of the class are required to be present. Keene's edition of Gray's Anatomy is the text used.

Note.—Special certificates in courses 4 and 5 are accepted by leading Medical Schools of the country, as an equivalent for the same subjects required by them for the degree of M. D., and all students entering these courses with a view to obtaining such certificates, must pass an examination in preparatory Latin and second year's English, and, if not prepared on entrance to take such examinations, they will be required to pursue these studies during the year in connection with the above course.

6. MICROSCOPY.

Two hours a week are given to this course. This course is elective. Instruction is given in Microscopical Technique, Vegetable and Animal Histology and Bacteriology. The principles of staining, Germ Culture, Methods of Analysis of air and water are studied as applied to Practical Hygiene. The course is by lectures and practical laboratory work.

Geology and Mineralogy.

PROF. BROWN.

1. GENERAL GEOLOGY.—Dynamical and Historical.

Three hours a week, Mondays, Wednesdays and Fridays, throughout the year.

This course is open to all students who have attained proficiency in Chemistry and Botany, and is required of all candidates for the degree of A. B.

Text-book, LeConte's Elements of Geology.

2. MINERALOGY.

Two exercises a week, Tuesdays and Thursdays, throughout the year.

This course is open to all, but is required of Engineering students. The work will be mostly practical, and consist of minute examinations of hand specimens of the various minerals and of blowpipe and acid tests of many of them. The facilities for this practical work are now excellent, as our collections are extensive and are well classified.

Text-book, Dana's Manual of Mineralogy.

3. ECONOMIC GEOLOGY.—Elective course.

Three hours a week, Mondays, Wednesdays and Fridays, throughout the year.

It is necessary to have completed course 1 before being admitted to course 3.

The first part of the course will be devoted to the geology of mining and agriculture; the second part will consist of the examination of rocks and rock-making materials with special reference to the qualities of our various building stones. Examination by microscope of thin sections of various rocks will be a frequent class exercise. Our equipment for this course is extensive, consisting of Ward's College collection of Rocks, Julien's Building Stones, and large additions made from the World's Fair collections of economic geology.

GEOLOGICAL ROOM.

Text-books, Tarr's Economic Geology of the United States and Merril's Stones for Buildings and Decorations.

4. Physical Geography and Meteorology. Elective.
Two hours a week throughout the year.

In the Spring term this subject will be taught principally by lectures upon the relation of Physical Geography to human history.

Field Work.

Local excursions, on Saturdays especially, are made by the regular classes during the Fall and Spring terms, and much attention is given to stratigraphic and economic geological problems. Few States offer so many advantages to students in practical geology as does West Virginia.

The site of the University, located as it is in the heart of the great Appalachian Coal Field and close to a great oil and gas region, offers unequalled facilities for the study of many problems connected with the useful science of geology.

METAPHYSICS AND POLITICAL SCIENCE.

PROFESSOR REYNOLDS.

1. ELEMENTARY METAPHYSICS AND ECONOMICS.

Three hours a week throughout the year are given to this course. It includes studies in the elements of Psychology, Logic, Ethics and Economics, and is intended to lay the foundation for more advanced work in these subjects, as well as to secure the culture and benefit derived from a mastery of the topics included.

2. ADVANCED METAPHYSICS.

Two hours a week throughout the year are given to this course, which includes the study of the higher and more modern Psychology, the study of Inductive Logic and the Principles of Science, and of the theory of Ethics.

3. HISTORY AND SCIENCE OF GOVERNMENT.

Three hours a week throughout the year are given to this course. An outline of General History is first given. Then the different forms and functions of government are studied, and this is followed by a study of the government of the United States.

4. POLITICAL ECONOMY.

Two hours a week throughout the year are given to this course. It is devoted to the study of the Principles of Economics and their practical application, and the discussion of various industrial, financial and social problems and theories.

The latest and best text-books are used in these courses, and there are frequent lectures and supplementary discussions by the professor and original exercises by the classes.

II. TECHNICAL AND PROFESSIONAL SCHOOLS.

Courses in Engineering, Civil, Mining and Mechanical.

DRAWING AND DESIGNING.

First Year.

1. Freehand Drawing, throughout the year; twice a week.

Second Year.

2. Fall Term: Land Plotting, mapping the survey; once a week.
   Winter Term: Instrumental Drawing; once a week.
   Spring Term: Mechanical Drawing; once a week.

Third Year.

3. Mechanical Drawing, throughout the year; twice a week.
4. Machine Drawing and Design, throughout the year; twice a week.

Fourth Year.

5. Fall Term: Detail working plans, engineering construction; twice a week.
6. Winter Term: Detail working plans, machinery designing; twice a week.
7. Fall and Winter Terms: Machine Drawing and Designing; twice a week.
8. Spring Term: Thesis Drawing and Designs.

APPLIED MATHEMATICS.

Second Year.

9. Winter and Spring Terms: Descriptive Geometry; five hours per week.

Third Year.

10. Fall and Winter Terms: Analytic Mechanics; five hours per week.
11. Spring Term: Mechanics of Materials; five hours per week.

FOURTH YEAR.

12. Fall Term: Roofs and Bridges; five hours per week.
13. Thermodynamics of Engineering; three hours per week.
14. Fall and Winter Terms: Stereotomy; three hours per week.
15. Winter Term: Hydraulics; five hours per week.

ENGINEERING PROFESSIONAL STUDIES.

SECOND YEAR.

16. Fall Term: Land Surveying; five hours per week.

THIRD YEAR.

17. Fall Term: Geodetic and Mining Surveying; five hours per week.
18. Mechanism and Shop Appliances; three hours per week.
19. Winter Term: Railroad Location; five hours per week.
20. Mechanics of Machinery; three hours per week.
21. Spring Term: Railroad Construction; three hours per week.
22. Designing Machinery; three hours per week.
23. Architecture; three hours per week.
24. Throughout the year; Journal Meeting, one hour per week.

FOURTH YEAR.

25. Fall Term: Mining; two hours per week.
26. Winter Term: Power and Power Plants; three hours per week.
27. Civil Engineering; three hours per week.
28. Fall and Winter Terms: Designing Machinery; two hours per week.
29. Spring Term: Railroad Economy; three hours per week.
30. Specifications and Contracts; two hours per week.
31. Metallurgy of Iron and Steel; three hours per week.
32. Economics of Engineering; two hours per week.
Original and Thesis Work.
Throughout the year: Journal Meeting; one hour per week.

FIELD PRACTICE, LABORATORY AND SHOPWORK.

FIRST YEAR.

33. Throughout the year; Mechanic Arts, woodworking; three times per week.

Second Year.

34. Fall Term: Land Surveying; once a week.

35. Fall and Winter Terms: Mechanic Arts, iron and steel forging; twice a week.

36. Spring Term: Mechanic Arts, tin-smithing; once a week.

37. Mechanic Arts, Pipe-fitting and boiler work; once a week.

38. Throughout the year: Pattern Making and Casting; once a week.

39. Spring Term: Mechanical Laboratory; twice a week.

Third Year.

40. Fall Term: Levelling, triangulation; once a week.

41. Spring Term: Railroad Location; once a week.

42. Throughout the year: Mechanic Arts, machine shop practice; three times per week.

43. Mechanical Laboratory; once a week.

44. Attendance on motive power and shop machinery; time to be assigned for each student.

Fourth Year.

45. Fall Term: Original Surveys, &c.

46. Spring Term: Astronomical observations.

47. Throughout the year: Mechanic Arts, machine construction; twice a week.

48. Mechanical Laboratory, twice a week.

Civil and Mining Engineering.

PROF. JOHNSTON.

The department of Civil and Mining Engineering was established by the Board of Regents of the University in 1888, and a course of study leading to the degree of Bachelor of Science in Civil Engineering went into operation that year. Since that time a large amount of fine instruments and other valuable apparatus has been accumulated. New and commodious rooms and a laboratory has been provided in the new building known as Science Hall, and the courses of study have been so expanded and improved, that it is now believed to compare favorably with the courses of Engineering as taught in the leading technical schools of the country. The several courses of study have been arranged and planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering; so that graduates, guided by their theoretical education, and the practical training they get during the course, may find profitable employment in the line of their profession and develop into useful investigators and scientific constructors. It is the aim of this department to train its students to meet the actual demands of engineering science and practice, as well as to fit them to keep pace with professional progress. Some of the prominent characteristics of this department are its advanced mathematics, which occupy a prominent place in all courses, and extend up to the time of graduation.

Field, Laboratory and Shop Work cover a great amount of time, and a large number of subjects, giving the student an opportunity to become familiar with the instruments, methods and practices of engineering, that he could not possibly have in the older and more crowded institutions. Original investigation is encouraged and carried on at all times so that our graduates may not only fill subordinate positions, but become designers, and constructors of important works as well. The work of the students is based upon an extended course on the Mechanics and Economics of Engineering; the object aimed at is to give as thorough a preparation

SCIENCE HALL.

is possible for the general purposes of the profession in the following subjects: The survey, location and construction of railroads, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder, truss and suspension bridges, of towers, roofs and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors, coast and geodetic surveys; the determination of latitude and longitude and the location of true meridians; the projection of maps, the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the tests and selection of the materials of engineering; the design and construction of metallurgical works; the surveys of water works, canals, levees, revetments and retaining walls; the construction of coke ovens and the design of coal and coke plants; the construction and superintendence of power and power plants; the economic theories of railroad location and construction, track work and maintenance of way of railroads; the design and construction of hydraulic motors, and a course of instruction in mining especially adapted to the coal and ore mining peculiar to West Virginia.

The methods of instruction are by recitations, lectures, laboratory and field work. Original work is encouraged and required in all courses. A large amount of apparatus and instruments are free to the use of students, and each member of the class is required to use, and become familiar with all the instruments and apparatus belonging to that course. The facilities for instruction are believed to be full and efficient and afford fine opportunties for advanced investigation. Laboratory work is required in chemistry, mineralogy, physics, geology, thermodynamics, hydraulics and civil engineering, for which purpose all the laboratories, collections and library of the university are open to the students of this department. The material equipment of this department is already large and is constantly increasing; at present it consists of the civil engineering laboratory equipped with a collection of apparatus and instruments for instruction in engineering believed to be complete and modern, consisting of transits, levels, theodolites, surveyors' compasses, aneroid barometers, plane table, solar compass, sextant clinometers, odometer, pedometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, blue printing outfit, complete sets of United States standard weights and measures. Testing machines for strength of materials as wood, iron, steel, stone, cement, mortar, &c. A drawing room containing a large number of descriptive geometry models, and models of bridges, furnaces and many other structures, and a large number

of wood and plaster paris cast and models pertaining to descriptive geometry, architecture, art, &c.

The Mechanical laboratory is very large and complete, containing a great variety of machines and scientific appliances relating to steam, electric and hydraulic power. Also a Photographic laboratory is used in connection with the courses in engineering.

The library contains a respectable number of volumes of standard engineering literature, mathematics and modern research and discovery, together with the leading periodicals of the day. The laboratories and collections in the departments of Chemistry, Physics, Geology, Paleontology, Biology and Mineralogy are large and complete, as will be described elsewhere.

ADMISSION.

All candidates for admission to full standing in the first year must have satisfactorily completed the preparatory course of the University or its equivalent, excepting Greek and Latin.

SPECIAL COURSES.

No student can be entered as a candidate for a degree after the beginning of the fourth year, though deserving young men who have not the time or are otherwise unable to take the full course, will be allowed to take a special or partial course, consisting of such studies as they are prepared to take up, provided that such partial course shall have been submitted to the faculty and approved by them.

Requirements for B. S. C. E. Degree.

FIRST YEAR.

Fall Term:—(1) French, three hours; (1) English, two hours; (1) Mathematics, five hours; (1) Chemistry and Physics, five hours; (1) Drawing, two hours.

Winter Term: (1) French, three hours; (1) English, two hours; (1) Mathematics, five hours; (1) Chemistry and Physics, five hours; (1) Drawing, two hours.

Spring Term:—(1) French, three hours; (1) English, two hours; (1) Mathematics, five hours; (1) Chemistry and Physics, five hours; (1) Drawing, two hours.

SECOND YEAR.

Fall Term:—(2) Mathematics, three hours; (2) French, three hours; (1) M. & P. Science, three hours; (2) Chemistry and Physics,

four hours; (16) Engineering, five hours; (34) Field Practice, two hours; (2) Drawing, two hours.

Winter Term:—(2) Mathematics, three hours; (2) French, three hours; (1) M. & P. Science, three hours; (2) Chemistry and Physics, four hours; (9) App. Mathematics, five hours; (2) Drawing, two hours.

Spring Term:—(2) Mathematics, three hours; (2) French, three hours; (1) M. & P. Science, three hours; (2) Chemistry and Physics, four hours; (9) Applied mathematics, five hours; (2) Drawing, two hours.

Third Year.

Fall Term:—(10) Applied Mathematics, five hours; (1) Geology, three hours; (1) Biology, two hours; (17) Engineering, five hours; (3) Drawing, two hours; (40) F. P., four hours.

Winter Term:—(10) Applied Mathematics, five hours; (1) Gelogy, three hours; (1) Biology, two hours; (19) Engineering, five hours; (3) Drawing, two hours.

Spring Term:—(11) Applied Mathematics, five hours; (1) Geology, three hours; (1) Biology, two hours; (23) Engineering, three hours; (21) Engineering, three hours;(3) Drawing, two hours; (41) Field Practice, two hours.

Fourth Year.

Fall Term:—(12) Applied Mathematics, five hours; (14) Applied Mathematics, three hours; (25) Engineering, two hours; (27) Engineering, three hours; (1) Astronomy, two hours; (5) Drawing, two hours; (45) F. P., four hours.

Winter Term:—(15) Applied Mathematics, five hours; (26) Engineering, three hours; (1) Mineralogy, two hours; (27) Civil Engineering, three hours; (1) Astronomy, two hours; (14) Applied Mathematics, three hours; (47) Drawing, two hours.

Spring Term:—(29) Engineering, three hours; (30) Engineering, two hours; (31) Engineering, three hours; (1) Mineralogy, two hours. Original and Thesis work throughout the year.

Note.—Four original performances are required during the third year, and three, including thesis, during the fourth year.

Thesis.

Each candidate for a degree is required to prepare a thesis on some subject related to a branch of engineering or other department of science. The thesis must be either a design or review of some machine, or structure, or process belonging to some department of scientific investigation. It must be fully elaborated and

accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. The thesis, with its accompanying drawings, must be presented to the professor of engineering, and will be deposited in the library of the University for permanent preservation.

DRAWING ROOM.

WEEKLY SCHEDULE.

FIRST YEAR.

TERM	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½ 9½ 10½ 11½ 1½	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.
WINTER.	8½ 9½ 10½ 11½ 1½	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics Mathematics.	English. Chemistry and Physics Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.
SPRING	8½ 9½ 10½ 11½ 1½	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.	English. Chemistry and Physics. Mathematics. F. Drawing.	French. Chemistry and Physics. Mathematics.

SECOND YEAR.

FALL.	8½ 9½ 10½ 11½ 1½	Metaphysics. Surveying. Mathematics. French. Practical Ph.	Surveying. Analytical Chemistry.	Metaphysics. Surveying. Mathematics. French.	Surveying. Analytical Chemistry.	Metaphysics. Surveying. Mathematics. French. F P. 4 hrs.
WINTER.	8½ 9½ 10½ 11½ 1½	Metaphysics. Desc. Geometry. Mathematics. French. Prac. Ph.	Desc. Geometry. Analytical Chemistry.	Metaphysics. Desc. Geometry. Mathematics. French Prac. Ph.	Desc. Geometry. Analytical Chemistry.	Metaphysics Desc. Geometry. Mathematics. French. Inst. Drawing. 3 hrs.
SPRING.	8½ 9½ 10½ 11½ 1½	Metaphysics. Desc. Geometry. Mathematics. French. Prac. Ph.	Desc. Geometry. Analytical Chemistry.	Metaphysics. Desc. Geometry. Mathematics. French Prac. Ph.	Desc. Geometry. Analytical Chemistry.	Metaphysics. Desc. Geometry. Mathematics. French. Mech. Drawing. 3 hrs

WEEKLY SCHEDULE. Continued.

THIRD YEAR.

TERM.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	App. Mech.	App. Mech.	App. Mech.	App. Mech	App. Mech.
	9½	Geol	Biol.	Geol.	Biol.	Geol.
	10½	G. & M. Surveying.	G. & M Surveying.	G. & M. Surveying.	G. & M Surveying.	G. & M. Surveying.
	11½					
	1½	Mech. Drawing.		Mech Drawing.		F. P. 4 hrs.
WINTER.	8½	App. Mech.	App. Mech.	App. Mech.	App. Mech.	App. Mech.
	9½	Geology.	Biol.	Geol.	Biol.	Geol.
	10½	R. R. Location	R. R. Location.	R. R. Location.	R. R. Location.	R. R. Location.
	11½					
	1½	Mech. Dr.		Mech. Dr.		
SPRING.	8½	App. Mech.	App Mech.	App. Mech.	App. Mech	App. Mech.
	9½	Geol.	Biol.	Geol.	Biol.	Geol.
	10½	Architecture.	Const'n & Track-work.	Architecture	R. R. Con. & Track-w'k.	Architecture.
	11½					
	1½	Mech. Dr.		Mech. Dr.		F. P. 4 hrs.

FOURTH YEAR.

TERM.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½	App. Mechanics.	App. Mechanics.	App. Mechanics.	App. Mechanics.	App. Mechanics.
	9½	Stereotomy.	Mining.	Stereotomy.	Mining.	Stereotomy.
	10½	Civil Engineering.	Astronomy.	Civil Engineering.	Astronomy.	Civil Engineering.
	11½					
	1½		Mech Dr.		Mech. Dr.	F P. 4 hrs.
WINTER.	8½	App. Mechanics.	App. Mechanics.	App. Mechanics.	App Mechanics.	App. Mechanics.
	9½	Power.	Mineralogy.	Power.	Mineralogy.	Power
	10½	Civil Engineering.	Astronomy.	Civil Engineering.	Astronomy.	Civil Engineering.
	11½	Stereotomy.		Stereotomy.		Stereotomy.
	1½		Mech. Dr.		Mech. Dr.	
SPRING.	8½	R R. Economy.	Specifications.	R. R Economy.	Specifications.	R. R. Economy.
	9½	Metallurgy	Mineralogy.	Metallurgy.	Mineralogy.	Metallurgy.
	10½	Original work.	Original work.	Original work.	Original work,	Original work.
	11½					
	1½	Thesis and Thesis.	Drawing.			F. P. 4 hrs.

Text-Books for Civil and Mining Engineering.

Free Hand Drawing—Burns on Perspective, Models.
Mechanical Drawing—Thorne's Junior Intermediate and Senior Courses.
Descriptive Geometry—Faunce, Warren.
Surveying—Gillespie.
U. S. Coast and Geodetic Surveys.
R. R. Location—Searles' Pocket Book.
Architecture—Bullock.
Parsons on Track.
Merriman's Hydraulics.
Warren's Stonecutting.
Ihlsengs' Manual of Mining.
Mahan's Civil Engineering.
Railroad Economy—Wellington.
Greenwood's Metallurgy of Iron and Steel.
Haupt on Specifications.
Roofs and Bridges—Merriman.

Reference Books.

Surveying—Johnson, Hodgman.
Descriptive Geometry—Church, Thorne.
G. & M. Survey, U. S. Coast Survey Maps—Merriman's Geodesy.
Architecture—Goodyear, Fergusson.
Roofs and Bridges—Weisbach, Dubois.
Hydraulics—Fanning, Kutter & Gauguillet.
General—Trautwine's Pocket Book.
Cullen on the Turbine—Pearson's, Sewage.
Kidder's Architecture, Scientific Publications.

Mechanical Engineering.

PROF. ALDRICH.

The Department of Mechanical Engineering and the Mechanic Arts was established by the Board of Regents at the annual meeting of 1891. The State Legislature had made an appropriation, earlier in the same year, providing for the erection of a suitable building for the instruction in this Department. In 1893, an appropriation was again made by the Legislature for building an addition to the building already erected.

The Mechanical Building is situated on the lower part of the Campus, just above the Pittsburgh extension of the Baltimore & Ohio Railroad, and accessible by the new University road and Beechurst Avenue. In this brick building there is a first floor space of thirty-two by one hundred and ninety-three feet, suitably divided into four rooms for the machine shop, forging work, boiler room and foundry work and mechanical testing, with two tanks below floor, capable of storing 20,000 gallons of water. Below the space for mechanical testing is a well-lighted basement, thirty-two by sixty feet, containing the compound pumps, condensers, triple expansion engine and dynamos for the University electric light, power service, water supply and experimental engineering. At each end of the building on the second floor is a room thirty-two by fifty feet; the south end room is used for all wood-working instruction and the north end room for office and drawing-room work and the nucleus of an engineering museum. The building is supplied with water and natural gas, each at a pressure of about one hundred and twenty-five pounds per square inch, affording ample facilities for the generation of power for shop and laboratory work.

The Course in Mechanical Engineering extends through four years and comprises academic instruction in Rhetoric, Composition and English Literature; French and German Grammar and Reading; Elementary Psychology, Logic and Economics; Mathematics,

MECHANICAL HALL.

including the Differential and Integral Calculus; general Geology and Mineralogy; Physics and Chemistry, with laboratory work in each; Physiology and Hygiene; and the following technical instruction in common with the students of Civil Engineering: Land Surveying, Field Practice and Plotting; Instrumental and Mechanical Drawing and Descriptive Geometry; Analytic Mechanics and Strength of Materials; Hydraulics; Metallurgy of Iron and Steel; Roofs and Bridges; Power and Power Plants; Specifications and Contracts, and the following Mechanical Engineering instruction: Machine Drawing and Design; Thermodynamics; Mechanism, Shop Appliances, and Mechanics and Machinery; Economics of Mechanical Engineering; and the four years' course in the Mechanic Arts and the two years' course in the Mechanical Laboratory, and attendance on motive power and workshop appliances and machinery.

The object of this course is to enable young men who have pursued successfully the above prescribed studies to enter upon the proper development of their professional work with intelligence and well directed application. Whatever special branch of mechanical engineering they may enter as their chosen or prescribed field is not in any measure directly prepared for in the above course. It is rather the purpose to give thorough, technical and practical training combined with academic courses containing the elements of a liberal education, as the best preparation for their future work, and as the proper foundation upon which they may build successfully their professional practice and reputation.

The instruction in Drawing follows that of the Civil Engineering students till the beginning of the third year, after which it is made more especially technical in the course in Machine Drawing and Design. The importance to the Mechanical Engineer of thorough training and practice in this cannot be overestimated. The instruction extends throughout the two remaining years of the course.

During each term of the third year it follows closely the classroom work of the particular technical studies of that term. Beginning with the analysis of mechanisms, machine tools and shop appliances, it is carried into the designing of mechanical movements, graphical statistics of mechanisms, the dynamics of machinery, the conventional and rational designing of structural details, adaptation of commercial sizes, proportioning fastenings, flanges, bearings, rotating pieces, connecting links, and mechanism and machinery of power transmission.

In the fourth year the designs of structural details of steam engines, boilers and accessories are taken up, with special attention given to the analysis and design of valve gears; in the winter

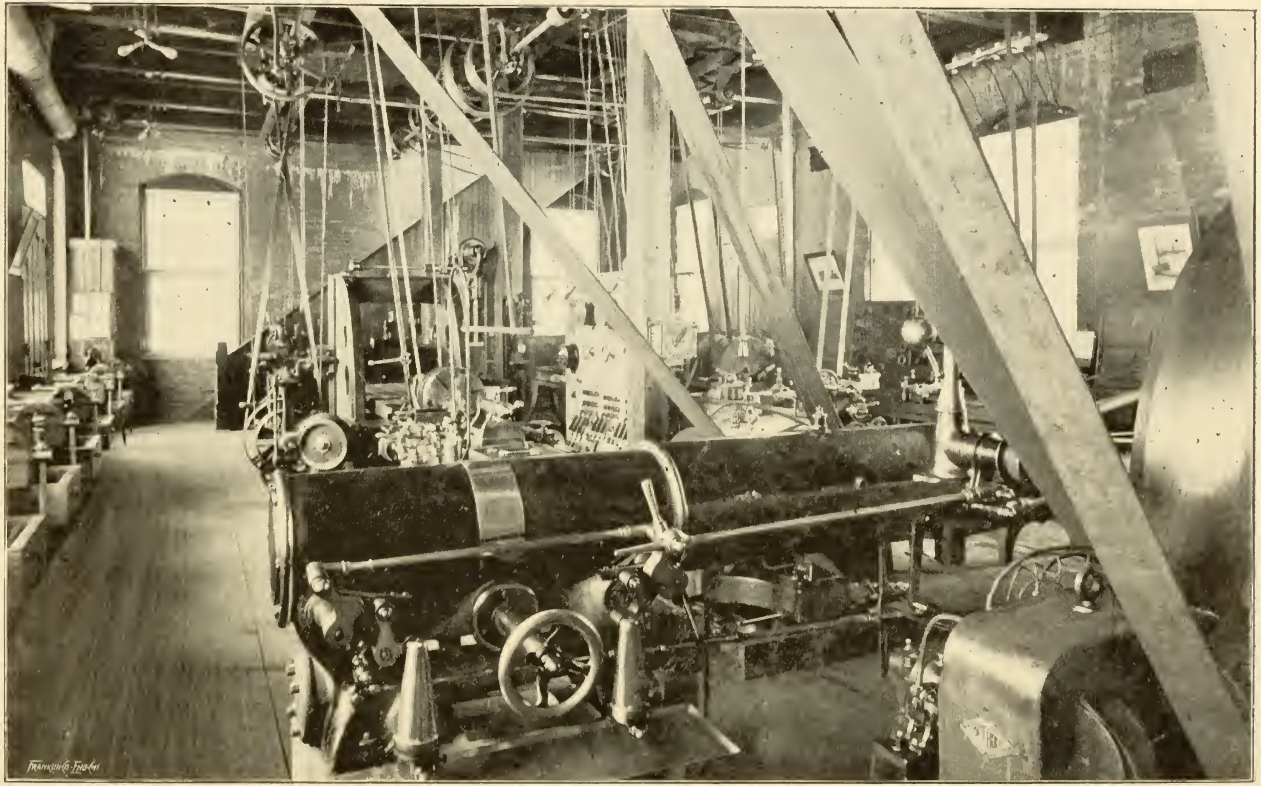
term, the assembled designing of prime movers and motive power machinery is given in connection with the class-room work of instruction in the generation, transmission and distribution of power; thesis designs are then selected or assigned, consisting of completed sets of plans, specifications, bills of material and estimates for a project, such as special plant appliances, machine tools or particular manufacturing machinery, heating and ventilating systems, motive power machinery, central station and power and manufacturing plants.

The above two years' course in Machine Drawing and Design is not carried through without frequent reference to and study of existing works, in the mechanical shops and laboratory as well as outside the institution. It is taken, as far as may be possible, along with the actual construction of typical detail pieces in the shops, and the testing of materials and the performance of shop and motive power machinery.

The study of Mechanism and Workshop Appliances begins with the analysis and classification of mechanisms; followed by the methods of Reuleuax and Willis; elements, pairs and trains of mechanism; the kinematics and statistics of mechanisms; principles of construction and operation of modern machine tools and workshop appliances, small tools and jigs; adaptation of cutting tools to material and character of work. In the next term this is followed by the mechanics of machinery; friction and lost work in machinery; conveying, transportation and power transmission machinery. The above is parallel with the two terms of instruction in Analytic Mechanics, the course of experimental mechanics in the mechanical laboratory, machine shop practice and machine drawing and design.

In the Thermodynamics of Engineering the student is familiarized with the subject of fuels, combustion, the nature and production of heat, the mechanical theory of heat; the analytic and graphic treatment of thermodynamic questions; the thermodynamics of steam and other heat engines, gas, vapor and petroleum engines; the thermodynamics of compressed air working and refrigerating machinery. In connection with this class-room instruction, mechanical laboratory work is carried on, as described under that head. This is followed by the scheduled course in Hydraulics, also with related laboratory work.

The instruction in Power and Power Plants considers the generation of power by turbines and water wheels, steam boilers and steam and gas engines; steam piping and distribution of steam; systems of transmitting power by mechanical electrical means and by hydraulic and compressed air pressure; storage, distribution and measurement of power; the location of power plants; selec-



MACHINE SHOP.

tion, arrangement, subdivision into units and installation of the motive power machinery, combined with design of motive power and transmission machinery and power tests in mechanical laboratory.

The Economics of Mechanical Engineering, next in course, comprises instruction in the economics of the development, location, design, construction, equipment and management of power and manufacturing plants; cost of power production and of manufactures; cost accounts and shop-order systems; combined with testing the performance and designating of power plants.

The Journal Meeting is conducted weekly, throughout the last two years of the course, and familiarizes the students with the literature of engineering, journals, periodicals and proceedings of engineering societies; data of engineering practice; classification and indexing; engineering ethics, economics and precedents.

Attendance on motive power and transmission machinery as well as care of tool room and supplies is required throughout the last two years of the course. Each student is detailed at assigned times during the year for duty at the following stations: steam boilers, steam heating and ventilating apparatus and blowers, steam engines, dynamos, trnnsmission machinery, and tool room. At each of these stations the student will keep a log or record of the condition, performance or output, as the case may be, of that of which he has been put in charge. Thus: (1) boiler log—weight of coal and water, pressure of steam, gas supply service water, air draft, temperature of chimney gases and of service and feed water; (2) steam-heating and air data—pressure of forge blast and exhaust, of hot air in pipes and of steam in heater, temperature of the outside and inside air, of the hot air and steam; speed of blowers and fans; (3) Steam engine and—speed and indicator cards and performance of the engine; (4) transmission machinery, speeds—condition of pulleys, belts, clutches and couplings, and reports; (5) tool room —condition of stock, supplies, tools, standard gauges, maintain the order and efficient condition of the tool room, and report.

Instruction in Experimental Engineering is given in the Mechanical Laboratory throughout the last two years. It involves the principles of design, construction, adaptation and calibration of standard engineering instruments for the measurement of length, area, volume, weight, power, speed, temperature and pressure, combined with qualitative and quantitative experimental work.

Beginning with experimental mechanics the work is carried along as nearly parallel as possible with the study of Analytic Mechanics and Mechanism and Machinery, comprising experimental work in the statics, dynamics and efficiency of mechanism and machinery, balancing rotating and reciprocating bodies, testing

performance of gear wheels, belts and shafting under variously loaded conditions. This is followed by testing materials of construction stone, brick, cement, wood, iron, brass, copper and steel, and the determination of the value of lubricating oils; the work follows closely the class-room instruction in the Strength of Materials during the same term.

The fourth year instruction begins with experimental work in Thermodynamics, analysis of fuels and chimney gases, quality and flow of steam, compressed air working, and indicator practice with valve setting. The following term experimental work in hydraulics is taken up, flow and discharge of water, weir measurements, water meters, testing turbines, hydraulic motors and machinery, performance of injectors and pumps. Electrical measurements and testing of dynamos and motors are followed by combined tests of performance of boilers, engines, dynamos and power transmission. Throughout such work the student is required to keep records of tests, facilitate his work by use of calculating instruments, tabulate and plot results, and make reports upon the tests in due form.

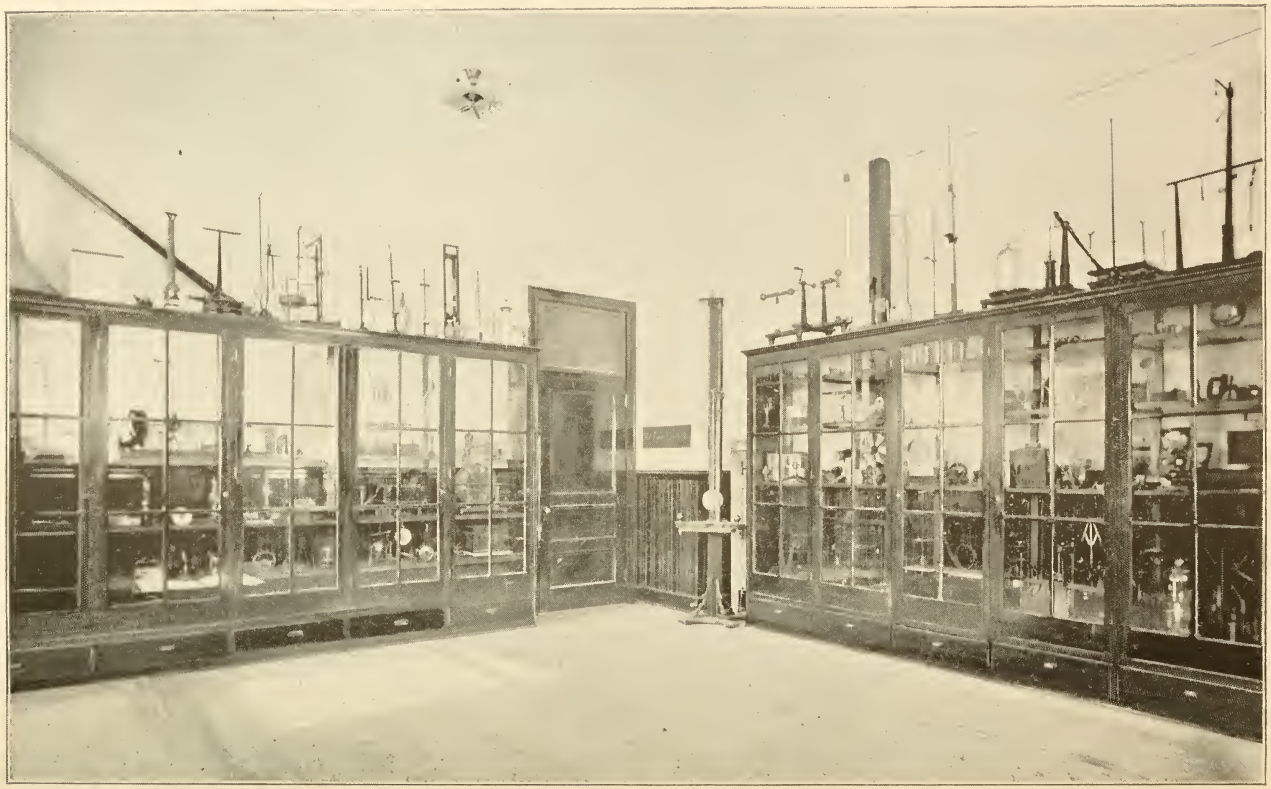
In the above description of the Course in Mechanical Engineering it will be noted that the technical instruction is supplemented throughout by practical work in drawing room, shops and mechanical laboratory. Some acquaintance with the rapidly increasing volume of engineering literature is also provided for; and at the close of each term of the third year, and of the Fall and Winter Terms of the fourth year the student is required to prepare an original literary production on a technical subject allied to his general engineering work of that term. Visits of inspection are made whenever it is possible to arrange for them.

In general, the course in Mechanical Engineering has been arranged to develop the principles and to prepare for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction and management of manufacturing, plants, shops and factories, and systems of fire protection, and lighting, heating and ventilating plants.

FACILITIES FOR INSTRUCTION.

For this work, as well as that in the Mechanic Arts, all facilities for instruction, including apparatus, machinery, stock and material, are purchased by the yearly appropriations made to this department by the Board of Regents from the Morrill Fund, in accordance with the act of Congress, August 30, 1890.

Standard thermometers and test gauges, United States standard



PHYSICAL LABORATORY.

sealed weights, Crosby dead-weight gauge-testing apparatus, Utica square-inch test valve, Brown's indicator drum spring testing instrument, Carpenter's apparatus for the hot and cold calibration of indicator springs are among the instruments furnished the student for calibration work.

Sweet's measuring instrument, micrometer and vernier calipers standard steel scales, polar and adjustable-bar planimeter, Coffin's averaging instrument, specially graduated spring balances and platform scales, are used for the determinations of length, areas, weight and in power measurements. A regulator with seconds pendulum and sweep-seconds hand is used for timing experimental operations.

Speed counters, tachometers, speed indicators, self-timing speed recorder; steam thermometers; pressure and vacuum gauges; recording draught and pressure gauges with special one-hour and twelve-hour clock movements; Hartford draught gauge; two Crosby, two Tabor and two Thompson steam-engine indicators; Carpenter's separating and throttling calorimeters, Cochrane separating calorimeter, Barrus superheating calorimeter are used for testing the quality of steam; Barrus' apparatus is used for coal calorimetry, and Hempel's apparatus for analysis of gases and of products of combustion; and, a 50 H. P. Alden absorption dynamometer and water-cooled Prony brakes are used for power testing.

A Seller's injector, Hancock inspirator, Nathan ejector, Deane 4"x2½"x5" boiler feed pump, Deane 8" & 12"x7"x10" duplex tandem compound 250,000 gallon steam pump, Blake 4½" & 6½x3¾"x7" single tandem compound boiler feed pump, 3-inch standard Venturi water meter tube, ⅝" Hersey and ⅝" and 1" Thomson water meters, and 12" Pelton water wheel are used in hydraulic testing.

In testing materials, a 50,000 ℔. Riehle testing machine, a 5,000 ℔. Olsen transverse testing machine, and a Fairbanks cement tester are used at present.

The motive power machinery of the shop is freely used in experimental work, and consists of one 40 H. P. horizontal return fire-tubular boiler and a 35 H. P. 10¾"x30" Wheelock engine. The boiler, engines and electrical machinery for the power plant of the University are located in the Mechanical Building, and have been especially selected and arranged for experimental work. The 83 H. P. Harrison safety boiler supplies steam at 130 pounds gauge pressure for the triple expansion Buckeye engine combination, consisting of one 7½"x10" horizontal automatic cut-off engine, whose shaft is directly coupled to that of the 10" and 15½"x14" vertical cross-compound engine forming the intermediate and low pressure cylinders of the combination. Three dynamos are belted directly from this engine—one from each engine band wheel and one from

the connecting shaft, a 35 K. W. four-pole Crocker-Wheeler dynamo, a 20 K. W. and a 12.5 K. W. Detroit two-pole dynamo. The arrangements are such that the engines can be entirely disconnected and the Alden absorption dynamometer directly coupled to either engine shaft, or belted directly overhead from the engine band wheels. By the special arrangements of the steam and exhaust piping the engines may be worked singly, or as a pair of en gines or a triple expansion combination. In any one of these ways of working, the steam may be exhausted to air, or condensed by a Barr surface condenser, or a Worthington jet condenser, or a Schutte adjustable capacity exhaust steam induction condenser. The steam and exhaust pipes are equipped with Cochrane separators. The switchboard is fitted with Weston station ammeters and voltmeters and Bristol recording ammeter, voltmeter and wattmeter, for 110 volt circuits. A 7 K. W. Detroit motor is used for power purposes. The boilers are arranged for firing with coal or natural gas, and the Harrison boiler is specially fitted for experimental work in firing with natural gas, through gas pressure regulators.

In the drawing room there are sets of blue prints of almost all of the machinery and tools installed in the department, as well as an increasing number of other machines, and sets of blue prints of naval engines and steam launches furnished by the Bureau of Steam Engineering of the Navy Department. A Pedrick & Ayer Link Valve Motion model is used for the study of reversing link mechanism. Reference books, journals and sets of trade catalogues are kept on file for consultation. Collections of samples of raw and manufactured products are being gathered together as time and opportunity offer, so as to have at hand illustrative matter for the study of the materials of engineering; and, in other cases, samples of work and finished products are collected for students' reference.

Admission.

Candidates for admission to the course in Mechanical Engineering are required to pass a satisfactory examination in English Grammar, Arithmetic, Plane Geometry, Algebra (through indeterminate co-efficients), Geography, United States History and Freehand drawing. In general, candidates must have satisfactorily completed the preparatory course of the University, or its equivalent, excepting Latin and Greek; and have had, in addition thereto, the course in Freehand Drawing, or its equivalent.

The studies of the University should not be anticipated; but a thorough and working knowledge of the elements acquired, so that

academic and technical studies may be pursued to better advantage later on.

On the other hand, all students preparing to enter the course in Mechanical Engineering are advised to take the first year course in Mechanic Arts, during their first preparatory year, and the second year course in Mechanic Arts during their second preparatory year. Thus more time will be allowed for the advanced academic and technical studies, while the remaining shop work will be distributed throughout the four years to better advantage.

Synopsis of Requirements for Degree of B. S. M. E.

The Preparatory work for this course includes English, five hours; Mathematics, five hours; with two exercises in Freehand Drawing and three exercises in Mechanic Arts work, each week.

The Course in Mechanical Engineering being a four years' course devoted to the subjects of Mechanical and Electrical Engineering and the Mechanic Arts, with certain studies in common with the course in Civil Engineering, and a collateral course in English, Mathematics, Modern Languages, and Science, the following are the requirements for graduation:

First Year.

(1) English, two hours; (1) Mathematics, five hours; (1 and 3) Chemistry and Physics, five hours; (1) French, three hours; (33) Mechanic Arts, three times, weekly.

Second Year.

(1) Meta. and Economics, three hours; (4) Anal. Chemistry, two times; (2) French, three hours; (2) Mathematics, three hours; (2) Drawing, once; (16) Engineering and (9) Applied Mathematics, five hours; (2) Advanced Physics, two times; (35, 36, 37, 38) Mechanic Arts, three times, weekly.

Third Year.

(1) Geology, three hours; (4) German, two hours; (4) Biology, one hour; (4) Drawing, two times; (10 and 11) Applied Mathematics, five hours; (18, 20 and 22) Engineering, three hours; (24) Engineering, one hour; (43) Mech. Laboratory, once; (42) Mechanic Arts, three times, weekly.

Fourth Year.

(2) Geology, two hours; (5) German, three hours; (7 and 8) Drawing, two times; (12 and 15) Applied Mathematics and

(30 and 32) Engineering, five hours; (13) Applied Mathematics and (26 and 31) Engineering, three hours; (28) Engineering, two times; (48) Mech. Laboratory, two times; (47) Mechanic Arts, two times, weekly.

NOTE.—The figure in parenthesis, preceding the name of a study indicates the number of the course in that study. By consulting the number under that name, in the "Courses of Instruction" the description of that course will be found. The other figure indicates the number of hours, or times the exercise is given, per week. The work assigned for the drawing room, field practice, shops and laboratories increases the apparent number of hours per week. From two to three hours of department work in these branches, according to the assignment of the professor in charge, are construed to be equivalent to one class-room exercise of one hour duration.

Graduating Thesis.

Each candidate for a degree is required to prepare a satisfactory thesis upon a subject immediately related to the studies of his course. It may be of the nature of a design for a machine or plant, of a test of machinery, plant or appliances, or an investigation in some line of mechanical engineering work.

The degree of Bachelor of Science in Mechanical Engineering will be given to those who successfully pass the prescribed course of studies and practical work and present a satisfactory thesis.

MECHANICAL ENGINEERING COURSE WEEKLY SCHEDULE.

FIRST YEAR.

Term.	Hour.	Monday.	Tuesday.	Wednesday.	Thursday	Friday.	Saturday.
Throughout the Year.	8:30	French.	English.	French.	English.	French.	
	9:30	Chem. and Phys.	Chem. and Physics.	Chem and Physics.	Chem. and Physics.	Chem. and Physics.	
	10:30						
	11:30	Mathematics.	Mathematics.	Mathematics.	Mathematics.	Mathematics.	
	1:30	Mechanic Arts.		Mechanic Arts.		Mechanic Arts	

SECOND YEAR.

Term.	Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
	8:30	Mor. and Pol Sci.		Mor. and Pol. Sci.		Mor and Pol. Sci.	Mechanic Arts throughout year.
Fall.	9:30	Land Surveying.	Land Surveying.	Land Surveying.	Land Surveying.	Land Surveying.	
Winter. Spring.	9:30	Descriptive Geom.	Descrip. Geometry.	Descrip. Geometry.	Descrip. Geometry.	Descrip. Geometry	
	10:30	Mathematics.	Analyt. Chemistry.	Mathematics.	Analyt. Chemistry.	Mathematics.	
	11:30	French.		French.		French	
	1:30	Phys. Laboratory.		Phys. Laboratory.		Field Practice and Inst. Drawing.	
			Mechanic Arts		Mechanic Arts.	Mech. Drawing.	

THIRD YEAR

Term.	Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
	8:30	Mechanics	Mechanics.	Mechanics.	Mechanics.	Mechanics.	Mechanic Arts throughout year.
	9:30	Geology		Geology.	Biology.	Geology.	
Fall.	10:30	Mechanism.	German.	Mechanism.	German	Mechanism.	
Winter.	10:30	Mech. of Machinery.	German.	Mech of Machinery.	German.	Mech. of Machinery.	
	10:30	Des. Machinery.	German.	Des. Machinery.	German.	Des. Machinery.	
Spring.							
	11:30					Journal Meeting.	
	1:30	Mach Dr. & Design.	Mechanic Arts.	Mach Dr. & Design.	Mechanic Arts.	Mech. Laboratory.	

MECHANICAL ENGINEERING COURSE WEEKLY SCHEDULE.—Continued.

FOURTH YEAR.

Term.	Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Fall.	8:30	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Roofs and Bridges.	Mech. Laboratory throughout year.
Winter.		Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics	Hydraulics.	
Spring.		Economics of Eng'g	Spec. and Contracts.	Economics of Eng'g.	Spec. and Contracts	Economics of Eng'g.	
Fall.	9:30	Thermodynamics.	Geology. (2)	Thermodynamics.	Geology. (2)	Thermodynamics.	
Winter.		Power & Power Pl'ts.	Geology. (2)	Power & Power Pl'ts.	Geology. (2)	Power & Power Pl'ts.	
Spring.		Metallurgy.	Geology. (2)	Metallurgy.	Geology. (2)	Metallurgy.	
	10:30	German. (5)	Des. Mechinery.	German. (5)	Des. Machinery.	German. (5)	
	11:30					Journal Meeting.	
	1:30	Shopwork.	Designing.	Mech. Laboratory.	Designing.	Shopwork.	

Text-books for Mechanical Engineering and Mechanic Arts.

Bench Work in Wood.—Goss.
First Lessons in Metal Working.—Compton.
Workshop Appliances.—Shelley.
Elementary Mechanism.—Stahl & Woods.
Kinematics of Machinery.—Kennedy.
VanNostrand's Science Series, No. 54.
Mechanics of Machinery.—Kennedy.
Valve Gears.—Peabody.
Elements of Machine Design. –Unwin.
Elementary Machine Design.—A. W. Smith.
Analytic Mechanics.—Bowser.
Mechanics of Materials.—Merriman.
Text-Book of Materials of Construction.—Thurston.
Manual of Steam Boilers.—Thurston.
Thermodynamics of the Steam Engine.—Peabody.
Experimental Engineering.—Carpenter.
Development and Transmission of Power.—Unwin.

Reference Books.

Modern Machine Shop Practice.—Rose.
Mechanics of Engineering.—Weisbach.
Numerical examples in Practical Mechanics and Machine Design.—Blaine.
The Constructor.—Reuleaux-Supplee.
Machinery and Mill-work.—Rankine.
Steam Engine Design.—Whitham.
Modern Locomotive Construction.—Meyer.
Manual of the Steam Engine.—Thurston.
Manual of Marine Engineering.—Seaton.
Pumping Machinery.—Barr.
Hydraulic Motors.—Bodmer.
The Gas Engine.—Clerk.
Friction and Lost Work in Machinery.—Thurston.
Electric Transmission of Energy.—Kapp.
Compressed Air.—VanNostrand's Science Series, Nos. 40 and 106.
Steam Heating.—Baldwin.
Cost of Manufactures.—Metcalf.

MECHANIC ARTS.

WM. S. ALDRICH, DIRECTOR.

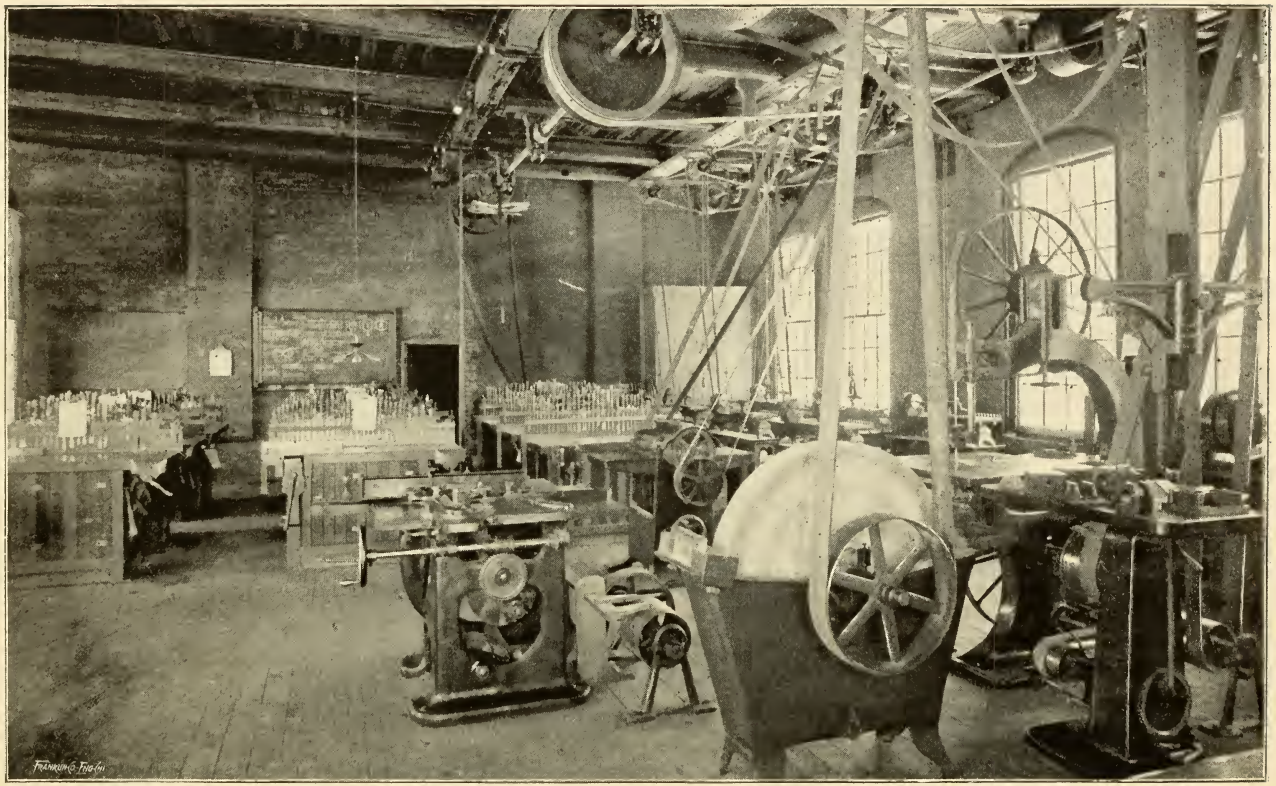
EWING M. MARTIN, *Instructor in Wood Working.*
RUFUS WEST, *Instructor in Metal Working.*

The Course in Mechanic Arts, extending through three years, comprises wood-working, carpentry, joinery and bench work, wood-turning and pattern-making; moulding and casting; forging in iron and steel; sheet metal work; pipe-fitting and boiler-work; machine shop practice, iron and brass work at the bench, hand-work with and constructive work on machine tools.

The object of this course is to present the simple elements of some of the constructive arts, which admit of being developed into a logical series of exercises, for their educational value rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the student is acquainted with the proper use of the fundamental tools and with the accuracy called for in the production of the elements of construction and of simple combinations of the same in fitting parts of work together. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and this course is therefore required of all students taking the full course in Mechanical Engineering.

In the fourth year, arranged entirely for students in Mechanical Engineering, machine construction is taken up in detail and practice given in the building, assembling and erecting of workshop and engineering appliances, motive power machinery and accessories.

While the method of instruction is very largely that of the shop-exercise system, in which the student is familiarized with the fundamental operations of constructive mechanics, yet it is later combined with the construction of machine elements, apparatus



CARPENTER SHOP

for shop or laboratory use, occasional repair work about the shops, and closes with project work in mechanical construction. Throughout the entire course the student is required to keep an account of his time and material on suitable time-card blanks; in this way he is early acquainted with the economies of shop production by giving attention to the two elements which go to make up the cost of the same. During the instruction in Mechanic Arts, for the first two years, the student is assigned a course of home study and reading; recitations are held upon these and other features of the work; at the end of the term an examination piece is assigned for shop work and a written examination is held on the reading, study and shop work which has been carried on during that term.

In Woodworking instruction is given in carpentry, joinery and other bench work; exercises with the fundamental edge tools in soft and hard woods, in different directions with respect to the grain; quality and strength of commercial wood; fastenings for woodwork; board jointing, matching, beading and moulding; fitting cabinet and builders' hardware; simple jointed woodwork, straight and angle joints; mitered, mortised and dove-tailed joints and framing; finishing surfaces; principles of construction, use and sharpening tools; project work.

Wood turning and use of woodworking machine tools; turning fundamental geometric forms in soft and hard woods—plain and stepped cylinders, single and double cones, concave and convex beading, and fitting reversed forms of these reversed curves; combinations of these in the production of simple turning projects; face-plate work, chucking, boring and threading; finishing and polishing. Exercises on planer, jointer, buzz-saw, jig-saw and band-saw.

In Pattern Making the application of the foregoing instruction is considered in its relation to the pattern making for machine construction; draft and shrinkage allowances; use of filletts; simple draw patterns and turned patterns; dowelling and parted patterns; cores and core boxes; finish of patterns; typical forms of machine elements and patterns for work to be executed later in the machine shop.

In Foundry work instruction is given in molding and casting in connection with pattern making; selection, preparation and use of molding, facing and parting sands; use of cores; core making and drying; venting and locating gates and risers; use of typical moulders' tool and appliances; making castings from exercise patterns and from those for machine shop exercises.

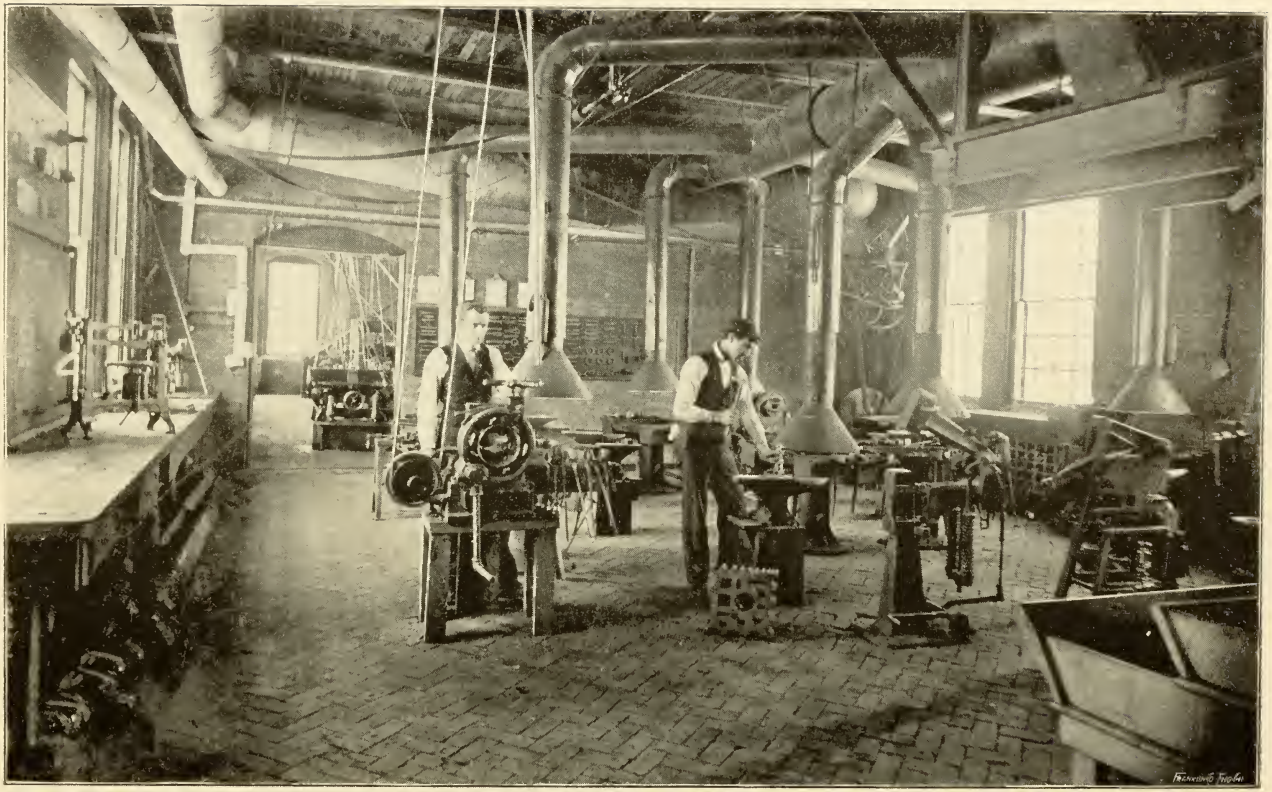
In Iron and Steel Forging the instruction consists of practical work in drawing out and sizing; quality of iron, cutting, bending, twisting, punching, splitting, forming, use of flatter, fuller, set

and swager; welding iron, scarfed, lap, tongue and butt welds; exercises in jointing, fitting and combinations of elements; working steel; forging, tempering, annealing, case-hardening; toolsmith's work, making tools to be used later in the machine shop, using typical steel for the typical tools; working coal and gas forges.

In Sheet-Metal work instruction is given in soft and hard soldering, brazing, tinning, forging and use of coppers ; making seamless and solder jointed work in tin and sheet-iron ; laying out, cutting and forming typical geometric forms in sheet metal ; and making solder joints in electrical fitting.

In Pipe Fitting and Boiler Work the student is given a series of exercises in cutting pipe, threading, fitting sleeves, nipples, tees, ells, plugs, bushings, unions and valves; bending and coiling pipe; making joints and use of packing in screw and flange connections; making joints and fitting connections in lead pipe. Cutting pipe and bolt holes in boilers, making screwed and flanged connections to boiler; ratchet drilling, soft and hard patches, tank, boiler and truss riveting, caulking and tube expanding.

In the Machine Shop instruction begins with iron work at the bench, chipping, filing, scraping, fitting, polishing, bevelling, chamfering, key-seating; laying out and guaging work; fitting interior and exterior surfaces, right and oblique angles; formation of a straight edge and a surface plate; use of machinists' small tools; bench work in brass; formation of standard measuring instruments and guages and machinists' small tools. This is followed by handwork with machine tools; drilling, tapping, screw-cutting with taps, dies and chasers; hand-turning in metal, using soft metal brass, cast iron and wrought iron; care and construction of edge tools for metal working. Then instruction is given in the care and use of machine tools, drill-press, lathe, shaper, planer, emery grinding, milling machine, turret lathe work; the construction, care and use of edge tools, as adapted to the material, kind of work and output. Production of finished machine elements and projects, and reproduction of typical details of the shop tools and machinery; interchangeable work. Performance of machine tools, efficiency of output. Building assembling and erecting machinery; reproduction of shop machine tools and work from original designs; lining, leveling, locating bearings and hangers; running line of shafting, putting up pulleys and belts; setting up machinery, construction of motive power machinery and accessories; making special apparatus for shop and mechanical laboratory.



BLACKSMITH SHOP.

Facilities for Instruction in Mechanic Arts.

The material equipment of the department for this work includes such apparatus, tools and machinery, and supplies of stock and material as will enable the work of instruction and of construction to be carried on efficiently. The twelve benches in the wood-working room are each equipped with a complete set of tools; and, as in the other branches, special tools and appliances are provided for occasional or class use. The wood-working machinery consists of six wood-turning and one each pattern-makers' lathes, power planer, jointer, jig-saw, band-saw and circular-saw.

The eight forges for working iron and steel are each equipped with a set of the essential tools and tongs, while extra and special sets of forge tools and appliances are placed for the use of two students in common. The forges have power blast and exhaust; blacksmiths' drills and swage block, punching and shearing machine, power hack-saw and bolt-header are provided for more advanced work of construction. Gas forges are also used to familiarize the student with gas forging and tempering.

The foundry equipment consists of one No. 30 Colliau cupola furnace of $\frac{3}{4}$ to $1\frac{1}{4}$ tons capacity per hour, with 30-inch Boston blower driven by an electric motor, sets of shovels, forks, ladles, tongs, barrow, steel truck, etc.; one Barnett's drying stove; one round brass furnace, with crucibles, ingot molds, riddles, brass molders' flasks; with patent snap flasks and those made by the student for use at his own compartment of the molding bench; selected assortment of molders' small tools and material.

In tin-smithing and sheet-iron work each student has a complete outfit with a gas furnace, and special tools in common. Stocks and dies and pipe-fitters' vises with ratchet drills and accessories form the equipment for this class of work.

In all of the machine shop practice the students have a well stocked tool room to draw upon, besides their individual sets of small tools for work at the bench or with machine tools. The latter comprise at present

One 16-inch Lodge & Davis tool-room screw-cutting lathe, with latest improvements for tool-room work and fitted with special taper attachment.

One 24-inch Lodge & Davis drill press.

One No. 1, Norton & Jones sensitive drill.

One 16-inch Gould & Eberhardt "double triple quick" shaper.

Three 12-inch Reed screw-cutting lathes, specially fitted for hand turning in iron and brass.

One 8-inch speed lathe, made by the Washburn Shops, of the

Worcester Polytechnic Institute, with complete equipment for hand turning, drilling and polishing.

One ¾-inch Norton Emery Wheel bench grinder, with set of emery wheels, for various purposes.

One No. 1 Worcester Drill grinder, made by the Washburn Shops.

One Deland, Faulconer & Norton (double) tool grinder.

One No. 1 Universal Cincinnati Milling Machine.

One 30-in.x30-in.x7 ft. spiral-geared Gray planer.

Admission.

The three-year course in the Mechanic Arts is open to all students of the University. A partial course is provided for the students in Agriculture, consisting of three exercises per week throughout the year in carpentry, joinery, bench work and wood-turning, and of two exercises per week, during the Fall and Winter terms, in iron and steel forging.

Weekly Schedule Mechanic Arts Course for Mechanical Engineering Students.

Term.	Year.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Fall.	I.	Carpentry, Joinery.		Carpentry, Joinery.		Wood Turning.	
	II.		Forging.		Forging.		Pattern Making.
	III.		Iron work at bench.		Iron work at bench.		Hand work Machine tools.
	IV.	Machine construction.				Machine construction.	
Winter.	I.	Carpentry, Joinery.		Carpentry, Joinery.		Wood Turning.	
	II.		Forging.		Forging.		Pattern Making.
	III.		Iron work at bench.		Iron work at bench.		Hand work Machine tools.
	IV.	Machine construction.				Machine construction	
Spring.	I.	Carpentry, Joinery.		Carpentry, Joinery.		Wood Turning.	
	II.		Tin smithing Machine tools.		Pipe fitting Machine tools.		Casting, Machine tools.
	III.						
	IV.	Machine construction.				Machine construction.	

The exercises are of three hours duration,—1:30 to 4:30 P. M.; and on Saturday, 8:30 to 11:30 A. M.

Weekly Schedule for a Three-Year Course in the Mechanic Arts.

Term	Year.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Fall.	I.		Carpentry, Joinery.	Wood Turning.	Carpentry, Joinery.	
	II. III	Forging. Iron work at bench.		Iron work at bench.		Forging. Handwork, machine tools.
Winter.	I.		Carpentry, Joinery.	Wood Turning.	Carpentry, Joinery.	
	II. III.	Forging. Iron work at bench.		Iron work at bench.		Forging. Handwork, machine tools.
Spring.	I.		Pattern making.	Moulding. Casting.	Pattern-making.	
	II.	Tin smithing.				Pipe-fitting.
	III.	Machine Tools.		Machine Tools.		Machine Tools.

The Exercises are of three hours duration,—1:30 to 4:30 P. M.

In either of the above schedules, those students who take the course in Military Science and Physical Training begin their shop work at 1:00 P. M., and so arrange their time that they will complete the required exercises without in any way conflicting with their later afternoon requirements in military and physical training.

Agriculture and Horticulture.

PROFESSOR RANE.

This course embraces all of the fundamental sciences of the scientific course and a thorough course in English as well. The department includes all classes in Agriculture, Horticulture and Entomology.

The aim of the course is to give to students therein a general education, and to fit them for the above pursuits; also to enable them to become teachers of science, or to fill positions as Agriculturists, Horticulturists, Entomologists or Botanists.

A short course in Agriculture is given for the benefit of any who may be unable to take the full course. After having completed this short course, any one desiring to continue in the long course will be allowed due credit for work done.

The green-houses, vineyards, gardens, floricultural grounds, &c., serve as labratories. The Agricultural Experiment Station staff and assistants as well as the West Virginia Academy of Science heartily co-operate in advancing the interests of the students.

Admission.

Candidates for admission to the full course in Agriculture and Horticulture are required to have satisfactorily completed the preparatory course of the University, or its equivalent, excepting Latin and Greek; and have had in addition thereto the course in Field Botany which is taken up for one hour per week during the year.

All students preparing to enter the course in Agriculture and Horticulture are advised to take the first year course in Agriculture together with Field Botany during the first preparatory year, and the second course (Horticulture) during the second preparatory year; also shop work, two hours, may be elected the first year, and Horticultural Laboratory, two hours, the second year. Thus, more time will be allowed for the advanced academic and technica studies.

AGRICULTURE AND HORTICULTURE.

The admission to the short course will be the same as that for the preparatory department, no examination being required.

Courses Offered.

(1) Agriculture.
Fall Term, two exercises per week; soils, their origin, character, cultivation, etc.; lectures and recitations.

(2) Agriculture.
Winter Term; two exercises per week; growing and feeding crops, etc.; lectures and recitations.

(3) Domestic Animals.
Spring Term; two exercises per week; feeding animals; lectures and recitations.

(4) Pomology (Fruit Growing).
Fall Term; two exercises per week; lectures and recitations.

(5) Olericulture (Vegetable Gardening).
Winter Term; two exercises per week; lectures and recitations

(6) Entomology (Insects).
Spring term; two exercises per week; lectures, recitations and collecting.

(7) Domestic Animals.
Fall Term; two exercises per week; horses, cattle, sheep and swine; lectures and recitations.

(8) Domestic Animals.
Winter Term; two exercises per week; stock breeding; lectures and recitations.

(9) Floriculture (Elective).
Spring Term; two exercises per week; lectures, recitations and practicums.

(10) Fungus Diseases (Elective).
Fall Term; one exercise per week; lectures, recitations and collecting.

(11) Advanced Agriculture (Optional with 12).
During the Senior year; lectures, recitations and economic

scientific research five hours per week. This includes thesis work for graduation.

(12) ADVANCED HORTICULTURE (Optional with 11).
During the Senior year: lectures, recitations and economic scientific research, together with collateral reading. This includes thesis work for graduation.

Text Books.

COURSE 1.
Emerson and Flint's "Manual of Agriculture" or equivalent.

COURSE 2.
Johnson's "How Crops Grow" or "How Crops Feed."

COURSE 3.
Stewart or Amsby on "Feeding Animals."

COURSE 4.
References, Warder's Pomology; Downing's Fruit and Fruit Trees of America; Thomas' American Fruit Culturist; Bory's Fruit Garden; Fuller's Small Fruit Culturist, etc., etc.

COURSE 5.
Ref. Henderson's Gardening for Profit; Brill's Seed Growing, etc.

COURSE 6.
Weed's "Economic Entomology;" Comstock's "Introduction to Entomology," etc., etc.

COURSE 7.
Curtis's "Horses, Cattle, Sheep and Swine."

COURSE 8.
Mile's "Stock Breeding."

COURSE 9.
Henderson's Practical Floriculture; Downing's Landscape Gardening, etc., etc.

COURSE 10.
Weed's "Fungi and Fungicides;" DeBary's Classification.

ENTOMOLOGY.

COURSE 11.

Loyd's "Agricultural Science;" Storer's "Agriculture;" etc., etc.

COURSE 12.

De Candalle's "Origin of Cultivated Plants;" Writings of Sir Thos. Andrew Knight, Prof. L. H. Bailey, etc., etc.

II Course.

SYNOPSIS.

First Year.

Fall.	Winter.	Spring
Rhet. & Com. 2 hrs. (*English*, 1 *hr.*)	Rhet. & Com., 2 hrs. (*English*, 1 *hr.*)	Rhet. & Com., 2 hrs. (*English*, 1 *hr.*)
Mathematics, 3 hrs. (*Algebra*, 1 *hr.*)	Mathematics, 3 hrs. (*Geometry*, 1 hr.)	Mathematics, 3 hrs. (*Trigonometry*, 1 *hr.*)
Mech. Lab., 2 hrs. (*Shop Work.*)	Mech. Lab., 2 hrs. (*Shop Work.*)	Mech. Lab., 2 hrs. (*Shop Work.*)
Chem. & Phys., 5 hrs. (*Course*, 1 *hr.*)	Chem. & Phys. 5 hrs. (*Course*, 1 *hr.*)	Chem. & Phys., 5 hrs. (*Course*, 1 *hr.*)
Agriculture, 2 hrs. (*Course*, 1 *hr.*)	Agriculture, 2 hrs. (*Course*, 2 *hrs.*)	Agriculture, 2 hrs. (*Course*, 3 *hrs.*)
Drawing, 2 hrs.	Drawing, 2 hrs.	Drawing, 2 hrs.

Second Year.

Fall.	Winter.	Spring
Rhet. & Rhetor., 3 hrs. (*English*, 3 *hrs.*)	Rhet. & Rhetor., 2 hrs. (*English*, 3 *hrs.*)	Rhet. & Rhetor., 2 hrs. (*English*, 3 *hrs.*)
M. & Pol. Sc., 3 hrs. (*Course*, 1 *hr.*)	M. & Pol. Sc., 3 hrs. (*Course*, 1 *hr.*)	M. & Pol. Sc., 3 hrs. (*Course*, 1 *hr.*)
Anatomy, 2 hrs. (*Biology*, 1 *hr.*)	Physiology, 2 hrs. (*Biology*, 1 *hr.*)	Field Botany, 2 hrs. (*Biology*, 1 *hr.*)
Geology, 3 hrs. (*Course*, 1 *hr.*)	Geology, 3 hrs. (*Course*, 1 *hr.*)	Geology, 3 hrs. (*Course*, 1 *hr.*)
Horticulture, 2 hrs. (*Course*, 4 *hrs.*)	Horticulture, 2 hrs. (*Course*, 5 *hrs.*)	Horticulture, 2 hrs. (*Course*, 6 *hrs.*)
Elective, 3 hrs.	Elective, 3 hrs.	Elective, 3 hrs.

Third Year.

Fall.	Winter.	Spring.
Phys. Geog., 2 hrs.	Phys. Geog., 2 hrs.	Phys. Geog., 2 hrs.
(*Geology*, 3 *hrs.*)	(*Geology*, 3 *hrs.*)	(*Geology*, 3 *hrs.*)
Zoology, 3 hrs.	Zoology, 3 hrs.	Struct. Botany, 3 hrs.
(*Biology*, 2 *hrs.*)	(*Biology*, 2 *hrs.*)	(*Biology*, 2 *hrs.*)
Agriculture, 2 hrs.	Agriculture, 2 hrs.	Floriculture, 2 hrs.
(*Course*, 7 *hrs.*)	(*Course*, 8 *hrs.*)	(*Course*, 7 *hrs.*)
Surveying, 5 hrs.	Elective, 5 hrs.	Elective, 5 hrs.
Elective, 3 hrs.	Elective, 3 hrs.	Elective, 3 hrs.

Fourth Year.

Fall.	Winter.	Spring.
Geology, 3 hrs.	Geology, 3 hrs.	Geology, 3 hrs.
(*Course*, 4 *hrs.*)	(*Course*, 4 *hrs.*)	(*Course*, 4 *hrs.*)
Microscopy, 2 hrs.	Microscopy, 2 hrs.	Microscopy, 2 hrs.
(*Biology*, 4 *hrs.*)	(*Biology*, 4 *hrs.*)	(*Biology*, 4 *hrs.*)
Agr. or Hort., 5 hrs.	Agr. or Hort., 5 hrs.	Agr. or Hort., 5 hrs.
(*Course*, 11 *or* 12 *hrs.*)	(*Course*, 11 *or* 12 *hrs.*	(*Course*, 11 *or* 12 *hrs.*)
Elective, 5 hrs.	Elective, 5 hrs.	Elective, 5 hrs.

Short Course.

One Year.

Fall.	Winter.	Spring.
English, 5 hrs.	English, 5 hrs.	English, 5 hours.
Arith. or Alg., 5 hrs.	Arith. or Alg., 5 hrs.	Arith. or Alg., 5 hrs.
Agriculture, 2 hrs.	Agriculture, 2 hrs.	Agriculture, 2 hrs.
Horticulture, 2 hrs.	Horticulture, 2 hrs.	Entomology, 2 hrs.
Hort. Lab., 1 hr.	Hort. Lab., 1 hr.	Hort. Lab., 1 hr.

THE LAW DEPARTMENT.

ST. GEORGE T. BROOKE,

Professor of Common and Statute Law, Constitutional and International Law.

W. P. WILLEY,

Professor of Equity Jurisprudence, Commercial Law, and Evidence.

Eminent Opinions.

"The time has gone by when an eminent lawyer, in full practice, can take a class of students into his office and become their teacher. Once that was practicable, but now it is not The consequence is that law schools are now a necessity." The Late Chief-Justice Waite.

"There is little, if any, dispute now as to the relative merit of education by means of law schools, and that to be got by mere practical training or apprenticeship as an attorney's clerk Without disparagement of mere practical advantages, the verdict of the best informed is in favor of the schools "—Report of the Committee on Legal Education to the American Bar Association, August 21, 1879, at Saratoga, N. Y.

Professor Bryce, in "The American Commonwealth,' attributes the superior attainments of the members of the legal profession in the United States "to the extraordinary excellence of many of the law schools."

Mr Heron, of Dublin, in his work on the History of Jurisprudence, declares that in the matter of legal reform, and in that of legal authorship, the United States have surpassed England, and he attributes the fact "to the superior legal education which the American lawyers receive, and to the schools of law established throughout the United States."

The Law Department of the University aims to prepare students for the practice of law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers.

who will go from the lecture room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The Course.

The full course covers the branches of Common and Statute law; Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleading and Practice.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Notes on Common Law Pleading and Practice in West Virginia by Professor Brooke; Williams on Real Property, and for *reference* the Code of West Virginia, and subsequent Acts of the Legislature.

The text-books are supplemented by lectures each day, and it is the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-books used in Constitutional Law are the "Federalist" and Cooley's Principles of Constitutional Law. This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States, interpreting its provisions, are also the subject of lectures.

The text book used in International Law is Woolsey's Introduction to the Study of International Law.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adam's Equity and Bishop on Contracts, with *reference* to Parsons, Story, Barton, Addison and other authors.

The course of lectures and study embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisdiction; Equity Pleading and Practice.

Lectures on Mercantile Law embrace the whole range of topics properly belonging to this department, including the laws relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Prom-

issory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures are supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course is covered by the lectures of one year, thus enabling the student, if he is prepared for it, to complete the course in one year. But whether he shall give one or two years to the course must be determined by his qualifications when entering. The Junior and Senior divisions of the course are found on a subsequent page.

As one term is not much dependent on another, as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter during the Fall Term if possible.

The work of the year is divided among the three terms as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings.	Prof. Brooke.
Contracts. Negotiable Instruments. Equity Pleadings. Evidence. Sales.	Prof. Willey.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2d books (continued.) Blackstone, 3rd and 4th books (begun.)	Prof. Brooke.
Agency. Partnership. Surety and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	Prof. Willey.

SPRING TERM.

Constitutional Law (continued.) Criminal Law, &c., Blackstone, 3d and 4th books (continued.) Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

The following are the Junior and Senior divisions of the course:

JUNIOR COURSE.	SENIOR COURSE.
Blackstone.	Common Law Pleading.
Rights of Persons.	Real Property.
Rights of Things.	Negotiable Paper.
Torts.	Partnership.
Criminal Law.	Suretyship and Guaranty.
Statute Law.	Evidence.
Constitutional Law.	Equity Pleading and Practice.
Contracts.	Bailments.
Agency.	Insurance.
Evidence.	Corporations.
Sales.	Practice in the Courts.

Methods of Instruction.

The methods of instruction consist of Lectures and Examinations, from approved text-books read in course, the drawing of the various legal papers requisite in the ordinary practice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot Court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

REQUIREMENTS FOR ADMISSION AND DEGREES.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

The Law Department does not hold itself responsible for anything but the attainments of the student in his law studies; nevertheless, the degree of his proficiency in the English branches is estimated in grading him for a degree in law. If a student realizes that he is deficient in general education, he can enter some of the classes in the academic departments of the University in connection with his law studies. But this is a matter resting entirely with the student.

The qualifications of a student for receiving the degree of Bachlor of Laws is not measured by the time he has spent in completing the

course, whether that be one year, or two years, or many years. But the sole test of his title to the degree is his ability to successfully pass a rigid examination on the whole course, and thus demonstrate that he is worthy of it. The value of a diploma from this department will not be impaired by conferring it where it is not merited. Time, therefore, is not made a test in any case, except that a student must have been in attendance upon the lectures at least one scholastic year before he will be admitted to the examination for a degree. If he fails to reach the standard in his first examination, he may apply for another examination one year thereafter, whether he has continued in attendance at the University or not.

Degrees Conferred.

Three degrees are offered in this department, namely: Bachelor of Laws, Bachelor of Arts in Law, Bachelor of Science in Law.

The regular law degree—BACHELOR OF LAWS—requires the completion of the full law course as set forth on a preceding page. By act of the Legislature, students receiving this degree are admitted to practice in any of the courts of this State without examination. Students from other states are also admitted, and their certificates of admission entitle them to practice in most of the other States.

The degree of BACHELOR OF ARTS IN LAW, requires the completion of the course in law together with a selection from the branches comprised in the regular course for the Bachelor of Arts degree sufficient to occupy the four year's course required for the latter degree.

For the degree of BACHELOR OF SCIENCE IN LAW, a similar requirement is made to that in the course for the degree of BACHELOR OF ARTS IN LAW. That is to say, the courses in Law and in Bachelor of Science are merged, and the former is accepted as an equivalent for so much of the latter as it represents in the four years requirement of study.

Expenses.

Tuition in the Law Department is free to West Virginia students.

Students from other states are charged $8.00 a term, or $24.00 a year.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

The summary of the expense of boarding, &c., given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text-books essential to the succeseful prosecution of the work of the law school are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence, Bishop on Contracts, Adams' Equity, The Fœderalist, Woolsey's International Law, Cooley's Principles of the Constitution. These books are kept at the University and sold to students at cost.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second hand" at from $12.00 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be over-estimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to

secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar, the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

COMMANDANT AND STAFF.

SCHOOL OF MILITARY INSTRUCTION AND PHYSICAL TRAINING.

James W. Hartigan, M. D.
Instructor in Physical Training.

Lieutenant Frank De W. Ramsey, 9th U. S. Infantry.
Professor of Military Science and Tactics.

At a meeting of the Board of Regents in July, 1893, this school was organized. All students entering the preparatory or freshman classes are required to enroll in this school for two years. The object of the school is to combine military instruction with physical training in such a way as to beget the habit and desire in the student to be prompt, obedient and efficient in the discharge of his duties, to confine college athletics within reasonable bounds, and direct physical education in more healthy channels, that it may act as an adjunct to mental development.

Many young men when entering college come from an active life and lapse into the sedentary habits of the student, or being suddenly released from the restraints of home, devote too much time to excessive athletics. This school is intended to correct both evils. The time devoted to it is five hours per week thoughout the year, and the instruction is as set forth below:

	Fall T.	*Winter T.*	*Spring T.*
Military Department:	3 hrs.	3 hrs.	4 hrs.
Department of Physical Training:	2 hrs.	2 hrs.	1 hr.

THE MILITARY DEPARTMENT.

The Military Department is included in the School of Military Instruction and Physical Training and the term of service required is the same.

The training of the student in this department will instill methodical habits and will require neatness, promptness and exactness.

The student will acquire an erect carriage and learn how to obey and to command.

Each student must be provided with a uniform consisting of cap, blouse and trousers and costing complete about $20. This uniform must be worn at all times.

Under the laws of the state, one hundred and forty-four cadets may be appointed by the regents of the university. Such appointed cadets receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books are not furnished to professional students.

Such cadets must not be less than sixteen nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to a Regent of the University. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The Commandant of Cadets, or the President, will be glad to answer any inquiry on the subject.

The following are the names and addresses of the Regents who go into office June 1, 1895:

Hon. John A. Robinson, Patterson's Depot, W. Va.
Hon. C. L. Smith, Fairmont, W. Va.
Hon. J. F. Brown, Charleston, W. Va.
Hon. J. H. Stewart, Raymond City, W. Va.
Hon. W. E. Haymond, Sutton, W. Va.
Hon. G. F. Evans, Martinsburg, W. Va.
Hon. C. B. Hart, Wheeling, W. Va.
Hon. S. F. Reed, Clarksburg, W. Va.
Hon. E. P. Rucker, Welch, W. Va.

Course of Instruction.

LIEUTENANT RAMSEY, U. S. ARMY,

ELEMENTARY COURSE.

The elementary course of two years which is required of all students will embrace both practical and theoretical instruction in Artillery and Infantry drill regulations and guard duty. The theoretical part of the course occupies one hour per week during the fall and winter terms of each year.

ADVANCED COURSE.

An advanced course of two years is open to those students who have completed the elementary course. It will consist of practical and theoretical instruction in military science, drill regulations, U. S. Army regulations, marksmanship, military signalling, fencing, &c. A student successfully completing this course will be competent to hold a commission in any military organization. The theoretical portion of this course will occupy one hour per week during the winter terms. The entire course will occupy not to exceed four hours per week.

For the purpose of instruction Cadets are divided into sections corresponding with their military proficiency and length of service. Students will be required to enter the 4th section but having previous military experience may be transferred to higher sections upon passing satisfactory special examinations.

For the purpose of administration and drill the Corps of Cadets is organized as a battallion of infantry. Cadet officers exercise the command and perform the duties of officers of their grade in the State National Guard. All appointments to office are made after competitive examination.

DEPARTMENT OF PHYSICAL TRAINING.

JAMES W. HARTIGAN, M. D., INSTRUCTOR.

All male students entering the preparatory or freshman classe are required to take this course for two years.

The department has a well equipped gymnasium with plung and shower baths attached. It has a limited number of good boat and it is hoped that in a few years boating will be one of the mos attractive and beneficial features of this work, as the University i located on an arm of one of the most beautiful boating courses i the country.

Students taking this course will provide themselves with towel and one pair of rubber shoes. Only members of special section will be required to procure gymnasium suits.

All students will be given a critical physical examination upo entering. An accurate record will be kept and each will be as signed the special work his examination shows him to need. Th examinations will be repeated from time to time during the yea that the instruction may be intelligently and profitably directed.

The instruction here will aim not only to the preservation o health during the mental toil of a college career, but also to the cor rection and perfect development of the whole physical organiza tion.

Course of Instruction.

FIRST YEAR.

The fall term will be given to light gymnastics. The pupils wil be drilled to music in the simple motions of stepping, charging, lunging, hopping, running, &c. The winter will be given to othe free gymnastic movements including the various head, neck, eye,

chest, waist and extremity exercises. During the spring term the time will be given to instruction in calisthenics, figure marching, running, and light dumb bell exercises.

SECOND YEAR.

During the fall term the light dumb bell exercises will be continued with exercises in vaulting, jumping and club swinging. The winter term will be devoted to club swinging, chest machine work, ladder and bar-bell exercises, and the spring term to horizontal and parallel bar work, boxing and ring exercises.

After the completion of this course students who do not take the advanced military course will be required to take gymnasium work one hour a week during their attendance at the University.

This does not apply to professional students.

MILITARY GRADUATES AND DISTINGUISHED CADETS, 1894-95.

Graduates in the Course of Military Science and Tactics, June 13, 1894.

1. Cadet First Lieutenant *Clement R. Jones*, Distinguished Cadet.
2. Cadet First Lieutenant *John Nuzum*, Distinguished Cadet.
3. Cadet Sergeant *James H. Collins*, Distinguished Cadet.
4. Cadet Second Lieutenant John W. Hughes.
5. Cadet First Lieutenant Della B. Kincaid.
6. Cadet Quartermaster Sergeant Charles E. Krebs.
7. Cadet Second Lieutenant Charles N. Ridgeway.
8. Cadet Sergeant Major Everett M. Pearcy.
9. Cadet Ordnance Sergeant Thomas C. Johnson.

The names are given in the order of merit. The three first named have been specially recommended to the War Department of the United States and to the Governor of the State of West Virginia.

Distinguished Cadets of Undergraduate Sections, June 13, 1894.

SECOND SECTION.

Cadet First Sergeant William R. Standiford.
Cadet Sergeant Jesse B. Protzman.
Cadet Principal Musician Henry M. Leps.

THIRD SECTION.

Cadet Josiah Keely.
Cadet Walter H. South.
Cadet Allen B. Noll.

FOURTH SECTION.

Cadet Corporal Earle A. Brooks.
Cadet Corporal Henry A. Eaton.
Cadet Desmoine Utt.

Roster of Officers of the Corps of Cadets for the Year 1894-5.

COMMANDANT CADETS.

Date Commission

Frank DeW. Ramsey, 1st Lieutenant 9th U. S. Inf. Sept. 25, 1891

CADET MAJOR.

Charles E. Carrigan.....June 13, 1894

STAFF.

Major James W. Hartigan, Surgeon.....Sept. 23, 1889
Cadet Captain Della B. Kinkaid, Captain of Artillery.....June 13, 1894
Cadet First Lieutenant Thomas C. Johnson, Quartermaster.....June 13, 1894
Cadet First Lieutenant William R. Standiford, Adjutant.....June 13, 1894
Cadet Second Lieutenant Bismarck G. Moore, Signal Officer.....June 13, 1894

CADET CAPTAINS.

1 *Captain of Artillery.*
2 Charles N. Ridgway, Company B.....June 13, 1894
3 Evert M. Pearcy, Company A.....June 13, 1894

CADET FIRST LIEUTENANTS.

1 *Quartermaster.*
2 *Adjutant.*
3 Henry M. Leps, Company A.....June 13, 1894
4 Justin M. Kunkle, Company B.....June 13, 1894

CADET SECOND LIEUTENANTS.

1 John G. Knutti, Company A.....June 13, 1894
2 O. Lloyd Haught, Company B.....June 13, 1894
3 *Signal Officer.*

CADET NON-COMMISSIONED STAFF.

1 Jesse B. Protzman, Cadet Sargeant Major.....June 13, 1894
2 Clarence F. Jolliff, Cadet Quartermaster Sergeant June 13, 1894
3 William F. Naret, Cadet Ordnance Sergeant....June 13, 1894
4 Desmoine Utt, Cadet Principal Musician.....Jan. 28, 1895

CADET FIRST SERGEANTS.

1 Charles E. McCoy, Company A .....June 13, 1894
2 Charles H. Waddell, Company B.....Jan. 8, 1895

CADET SERGEANTS.

1 Henry A. Eaton, Company A, (Colors).....June 13, 1894
2 Earle A. Brooks, Company A.....June 13, 1894
3 Walter H. South, unassigned.....June 13, 1894
4 Josiah Keely, Company A.....June 13, 1894
5 J. Morgan Orr, Company B.....June 13, 1894
6 Harry C. Hess, Company B.....Jan. 7, 1895
7 Lloyd L. Friend, Company B, (Colors).....Jan. 28, 1895

CADET CORPORALS.

1 William A. Cracraft, Company B.....June 13, 1894
2 Wade C. Kilmer, Company A.....Nov. 19, 1894
3 William D. R. Annan, Company B.....Nov. 19, 1894
4 Frank A. Rowan, Musician.....Jan. 28, 1895
5 Edward L. Naret, Company A, (Lance Corporal). Nov. 27, 1894
6 Charles W. Cramer, Company B, (Lance Corporal).....Nov. 28, 1894
7 H. Howard Moss, Jr., Company B, (Lance Corporal).....Jan. 8, 1895
8 Cuthbert A. Osborn, Company A, (Lance Corporal).....March 5, 1895
9 Luther A. Walker, Company A, (Lance Corporal) March 5, 1895

Enrollment of the Military Department, 1894-5.

CADET GRADUATES:—5.

Order of Standing. Name and Rank. Year of Enrollment.

1 Carrigan, C. E., Cadet Major.....1889
2 Kinkaid, D. B., Cadet Captain.....1890
3 Ridgway, C. N., Cadet Captain.....1890
4 Pearcy, E. M., Cadet Captain.....1890
5 Johnson, T. C., Cadet First Lieutenant.....1890

FIRST SECTION—9.

1 Standiford, W. R., Cadet First Lieutenant.....1891
2 Protzman, J. B., Cadet Sergeant Major.....1892
3 Leps, H. M., Cadet First Lieutenant.....1891
4 Kunkle, J. M., Cadet First Lieutenant.....1891
5 Jolliff, C. F., Cadet Quartermaster Sergeant.....1892
6 Knutti, J. G., Cadet Second Lieutenant.....1891
7 Haught, O. L., Cadet Second Lieutenant.....1891
8 Naret, W. F., Cadet Ordnance Sergeant.....1892
9 Moore, B. G., Cadet Second Lieutenant.....1891

SECOND SECTION, 8.

1 Keely, J., Cadet Sergeant.....1892
2 South, W. H., Cadet Sergeant.....1892
3 Friend, L. L., Cadet Sergeant.....1892
4 Orr, J. M., Cadet Sergeant.....1892
5 McCoy, C. E., Cadet First Sergeant.....1892
6 Naret, E. L., Cadet Lance Corporal.....1892
7 Hess, H. C., Cadet Sergeant.....1892
8 Cramer, C. W., Cadet Lance Corporal.....1892

THIRD SECTION, 11.

1 Brooks, E. A., Cadet Sergeant.....1893
2 Eaton, H. A., Cadet Sergeant.....1893
3 Utt, D., Cadet Principal Musician.....1893
4 Cracraft, W. A., Cadet Corporal.....1893
5 Waddell, C. H., Cadet First Sergeant.....1893
6 Kilmer, W. C., Cadet Corporal.....1893
7 Annan, W. D. R., Cadet Corporal.....1893
8 Scott, B. F., Cadet.....1893
9 Moss, H. H., Jr., Cadet Lance Corporal.....1894
10 Cochrane, C. S., Cadet.....1894
11 Walker, L. A., Cadet Lance Corporal.....1894

FOURTH SECTION, 44.

1 Lowe, F. K., cadet.....1894
2 Yoho, R. C., cadet.....1894
3 Holden, C. F., cadet.....1894
4 Goodwin, E. F., cadet.....1894
5 Lowther, C. F., cadet.....1894
6 Laughlin, F. cadet, volunteer.....1894

7 Robe, W. L., cadet 1894
8 Langfitt, J. V., cadet 1894
9 Babb, F. H., cadet 1894
10 Osborn, C. A., cadet lance corporal 1894
11 Carskadon, E. B., cadet 1894
12 Krebs, G. R., cadet 1894
13 Heavner, R. W., cadet 1894
14 Lively, W. E. Jr., cadet 1894
15 McCoy, P., cadet 1894
16 Gramm, G. E., cadet 1894
17 Moreland, J. R., cadet 1894
18 St. Clair, H. A., cadet 1895
19 Wood, F., cadet 1894
20 Thomas, B. S., cadet 1894
21 Mansbach, L., cadet 1894
22 Chapman, W. M., cadet 1894
23 Konrad, P., cadet 1894
24 Nethken, C. E., cadet 1895
25 Casto, D. Clayton, cadet 1894
26 Holy, G. H. F., cadet 1894
27 Cochrane, D. M., cadet 1894
28 Clark, F. E., cadet 1894
29 Keys, T. P., cadet 1894
30 Frazier, J. C., cadet 1894
31 Barrickman, V. A., cadet 1894
32 Core, C. H., cadet 1894
33 Dille, E. M., cadet 1894
34 Rane, J. C., cadet 1894
35 Lemley, E. P., cadet 1894
36 Caldwell, R. G., cadet 1894
37 Cooper, E. 1894
38 Smyth, H. L., cadet 1894
39 St. Clair, F. J., cadet 1894
40 Arnold, W. S., cadet 1894
41 Vincent, G. A., cadet 1894
42 Kerr, C. P., cadet, volunteer 1894
43 Hogsett, S. W., Cadet 1895
44 Seip, H. H., cadet, volunteer 1894

MUSICIANS, 5.

1 Rowan, F. A., cadet corporal, volunteer 1894
2 Reichard, L. N., cadet musician, volunteer 1892
3 Grant, D., cadet musician, volunteer 1894
4 Taylor, L. R., cadet musician, volunteer 1894
5. Willey, G. R. C., cadet musician, volunteer 1895

Changes and Casualties Since Last Catalogue.

HONORABLY DISCHARGED, 37.

Graduated from the University, 10.

Cadet Major Macker Babb	June	13, 1894
Cadet Captain Kemble White	June	13, 1894
Cadet Captain John L. Henderson	June	13, 1894
Cadet Captain Robert H. Ramsay	June	13, 1894
Cadet First Lieutenant John Nuzum	June	13, 1894
Cadet First Lieutenant Clement R. Jones	June	13, 1894
Cadet First Lieutenant Henry A. Steed	June	13, 1894
Cadet Second Lieutenant John W. Hughes	June	13, 1894
Cadet Quartermaster Sergeant Charles E. Krebs	June	13, 1894
Cadet Sergeant James H. Collins	June	13, 1894

Resignation Accepted—Severed Connection with University, 23.

Cadet Corporal J. B. Payne	June	13, 1894
Cadet E. F. Allen	June	13, 1894
Cadet J. T. Baker	June	13, 1894
Cadet S. H. Post	June	14, 1894
Cadet H. E. Palmer	June	14, 1894
Cadet B. W. Moore, Jr.	June	14, 1894
Cadet F. H. Wotring	June	14, 1894
Cadet H. B. Rich	Sept.	27, 1894
Cadet Sergeant W. B. Allemong	Sept.	30, 1894
Cadet B. W. Russell	Oct.	3, 1894
Cadet L. B. Bowles	Oct.	10, 1894
Cadet J. R. Davenport, Jr	Oct.	23, 1894
Cadet L. E. Humphrey	Oct.	23, 1894
Cadet J. T. Daily	Nov.	17, 1894
Cadet Corporal B. W. Berry	Dec.	13, 1894
Cadet R. M. Lee	Dec.	26, 1894
Cadet L. C. Alexander	Jan.	14, 1895
Cadet J. R. McCollum	Jan.	14, 1895
Cadet A. B. Noll	Jan.	14, 1895
Cadet J. C. Watson, Jr	Jan.	14, 1895
Cadet C. E. Durst	Feb.	11, 1895
Cadet L. V. Waters	Feb.	11, 1895
Cadet J. C. Baker	March	8, 1895

Resignation Accepted—4.

Cadet A. B. Carmack.....Sept. 20, 1894
Cadet H. F. Smith.....Sept. 20, 1894
Cadet H. Shaw.....Sept. 27, 1894
Cadet E. B. Reynolds.....Oct. 10, 1894

DROPPED FROM THE ROLL, 12.

Resignation accepted. Severed connection with University. Record and service unsatisfactory. 2.

Cadet J. H. Meredith.....April 14, 1894
Cadet H. F. Toudy.....Jany. 14, 1895

For absence without leave. Record and service unsatisfactory. 7.

Cadet W. T. Boyd.....April 19, 1894
Cadet C. A. Barlow.....June 13, 1894
Cadet J. T. Pancake.....October 3, 1894
Cadet H. H. Fox.....October 3, 1894
Cadet J. D. Parsons.....October 3, 1894
Cadet W. A. Pancake.....Oct. 23, 1894
Cadet J. R. Cunningham.....Oct. 23, 1894

In accordance with action of the Faculty. Record and service unsatisfactory, 2.

Cadet W. T. Patton.....April 19, 1895
Cadet F. D. Mitchell.....Jany. 14, 1895

Upon Surgeon's certificate of disability. 1.

Cadet W. F. Rau.....May 14, 1894

DISHONORABLY DISCHARGED. 1.

Suspended from the University and for failure to account for public property for which he was responsible. 1.

Cadet O. L. Walker.....March 11, 1895

Summary.

Number of Cadets enrolled April 10, 1894	67
New Cadets enrolled during the year	65
Total enrollment	132
Honorably discharged during the year	37
Dropped from the rolls during the year	12
Dishonorably discharged during the year	1
Total casualities	50
Number of Cadets enrolled March 15, 1895,	82

III SPECIAL COURSES.

Pedagogy.

This course is given for the benefit of students who wish to qualify themselves for teaching while pursuing their studies in the University. It includes, as exhibited below, Science and Art of Teaching, History of Education, Educational Pyschology, School Management, State Laws and Requirements for Free Schools, &c., &c. Five hours a week throughout the year are given to the exercises of the course. A good collection of the latest and best works on Pedagogy and educational subjects has been added to the University library and the number of works in these and kindred subjects will be constantly increased.

COURSES OF INSTRUCTION.

1. *Practical.*—Embracing the organization and management of schools; courses of study; supervision in city, town and district schools; school buildings and appliances; school law, &c.

2. *Scientific.*—A study of the principles underlying the art of teaching; educational psychology; the philosophy of education.

3. *Historical.*—Origin and growth of the school system in West Virginia; the history of education in the United States; education in various ages and countries; eminent educators and educational epochs.

These courses are distributed as follows:

FIRST YEAR.

Fall Term.—History of Education in West Virginia; Morgan and Cork, and lectures; Elements of Pedagogy; White.

Winter Term.—Education in the United States; Boone; Theory and Practice; Page and DeGarmo.

Spring Term.—School Management; White; Educational reformers; Quick.

WEST VIRGINIA UNIVERSITY.

Special Courses

IN BOOK-KEEPING, PENMANSHIP AND SHORTHAND.

D. M. WILLIS, INSTRUCTOR.

AT THE annual meeting of the Board of Regents in June, 1895, it was ordered that hereafter the course in Book-keeping be extended so as to comprise all subjects properly coming under that Department; that courses be offered in

PENMANSHIP
SHORTHAND
AND
TYPE WRITING

While these courses are intended primarily for students in the regular departments who desire a knowledge of business principles and practices, they will comprise a complete business course whose extent and thoroughness will be equal to that given in the best schools of the country.

SHORTHAND

Any one taking the Commercial Course is at liberty to pursue studies in any other departments of the University.

SPECIAL ADVANTAGES IN COMMERCIAL LAW.

ANY person may enroll in the Law Department and attend lectures in Business, Constitutional and International Law given by Judge Okey Johnson and Professors Brooke and Willey.

SPECIAL ATTENTION

Should be paid to the fact that students in the the Commercial Course will receive instruction in Mathematics and English under the regular University Professors in those departments.

TUITION FREE.

TUITION in all departments of the University is free to West Virginia students. All students, on entering, are charged a matriculation fee of $5.00 and an incidental fee of $2.00 per term.

For full information in regard to cost of board, room &c., see the University Catalogue, which will be sent on application to President J. L. Goodknight, Morgantown.

Second Year.

Fall Term.—Grading and classification of Schools, according to the Manual of State Superintendent Lewis: School Supervision: Payne.

Winter Term. Compayre's Lectures on Pedagogy: Educational Psychology, with collateral reading.

Spring Term.—Compayre's History of Pedagogy: Papers and discussions.

These courses will be supplemented by lectures and collateral readings and each will occupy five hours per week. Over one hundred of the latest and best works on educational subjects have been added to the library. Students pursuing any of these courses will find these books very helpful.

Book-Keeping.

Three hours a week throughout the year. A sufficient course for common business, and a good introduction to an advanced Commercial Course and a Course in Commercial Law.

Anatomy.

Five hours a week throughout the year. Designed especially for those who are preparing for the study of Medicine. For full description of the course, see the announcement of the School of Biology.

PREPARATORY DEPARTMENT.

The Preparatory Department is maintained to prepare students for the various regular University courses. Students entering this department must take the studies that are required for admission to these courses. Those who do not expect to enter a University course will be given the Preparatory Course, if they are able to take it, and will take it regularly.

The control of this Department is vested in a Preparatory Faculty, consisting of the President, the Principal and his assistants, the Commandant of Cadets and the Instructor in Physical Culture, and all students in the Department are under the control of this Faculty so far as their work is in the Department. All matters of discipline involving suspension or expulsion from the University are determined by the University Faculty.

Admission.

For admission to this Department, students should be proficient in the studies making up the ordinary course in the common schools of the State, and especially in English grammar and arithmetic. But no special examination is required for entrance unless the student wishes to take advanced standing. He is admitted on trial, and, if he can not pursue the course successfully, he is, after sufficient time to prove that fact, required to withdraw.

Students upon entering, will be assigned to such classes and sections of the course as they are qualified for, and will be advanced to higher classes and sections as fast as they acquire sufficient proficiency, till the course is finished. They will not be permitted to enter any higher class or section till they have passed in the lower, or shown by special examination that they have the required degree of proficiency.

The work in this Department is so arranged as to enable students to take the course in the shortest time consistent with the attainment of the required proficiency. Students who upon entering can take advanced standing, and who are capable of making good

PREPARATORY BUILDING AND LIBRARY.

progress, may finish the course in one year. Where they do not lack much of the course, they may even finish it in one or two terms. Students who must take the course from the beginning, and who can not make rapid progress, may find it necessary to give two years, or even more, to the work of the department.

Course of Study.

The course of study in this Department is based upon the following general outline:

English.

Junior Section: English Grammar—Swinton—5 hours a week, half the year. Analysis—Reed & Kellogg—5 hours a week, half the year.

Senior Section: Elements of English—Chittenden—5 hours a week, half the year. Composition—Williams—5 hours a week, half the year.

Ability to analyze and parse English sentences correctly, and to apply the rules for orthography, the use of capitals, punctuation, invention, &c., in ordinary composition, is the standard required.

Mathematics.

Junior Section: Arithmetic—Greenleaf—5 hours a week, half the year. Algebra—Milne—5 hours a week, half the year.

Senior Section: Algebra—Wells' University—5 hours a week, half the year. Plane Geometry—Wells'—5 hours a week, half the year.

Proficiency in Algebra to Logarithms or Theory of Equations and in Plane Geometry is the standard required.

Latin.

Junior Section: Latin Lessons—Chase and Stuart—5 hours a week throughout the year.

Senior Section: Reading, from Cæsar, Cicero and Virgil, with constant drill in forms and exercise-writing, 5 hours a week throughout the year.

Ability to read ordinary Latin prose and poetry, to explain grammatical forms and give rules for ordinary Latin constructions, and to apply the rules for forms and constructions in writing ordinary Latin prose exercises, is the standard required.

Greek.

Five hours a week for one year, beginning with declensions and conjugations and ending with Anabasis, Book II.

The time required to complete this course depends upon the standing taken upon entrance, and the diligence used and the progress made afterwards.

Students must make the required standing in the Junior Section of each study before they can be admitted to the Senior Section, and they must make the required standing in the Senior Section in each study before they can be admitted to University classes in the same study.

The schedule of recitations will be arranged when the classes are formed.

West Virginia Agricultural Experiment Station, 1894

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The West Virginia Agricultural Experiment Station, in accordance with the provisions of the Act of Congress establishing it, is organized in connection with the W. Va. University. The State of West Virginia makes no appropriation for the support of this institution and never has. The University assigned it a building which has been enlarged and elaborately equipped for the purposes of an Agricultural Experiment Station, at station expense. It is provided with chemical, botanical, microscopical and entomological laboratories, each of which is provided with elaborate supplies of the most modern and approved apparatus for carrying on scientific investigations. In addition to the laboratories the building has proper offices for executive and clerical work and arrangements for preserving its collections and the results of scientific work conducted at the station, together with a valuable library.

The objects of the station are stated as follows in the Act establishing it:

Section 2. "That it shall be the object and duty of said Experiment Station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same, the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test the comparative effects of crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the pro-

duction of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

The State publishes the result of the scientific investigations in the bulletins and annual reports of the Experiment Station, which are distributed free of charge to farmers and other citizens of the State desiring them. The mailing list of the Station is over 31,000 names. The Station, during the past year, has devoted a large share of its energies to the study of the insect pests, and has made strenuous efforts to check the destruction of our extensive pine forests, which is going on so rapidly. All the fertilizers sold in the State are analyzed at the Station, and a large amount of horticultural work has been lately undertaken, together with a great variety of other investigations bearing directly upon the Agricultural development of the State. The staff of the Station also conducts a very extensive correspondence with the farmers of the

CHEMICAL LABORATORY OF THE STATION

State upon subjects in which they are immediately and personally interested. The staff also assists in all farmers' institutes held in the State, and attends all farmers' meetings to which it is invited. The Experiment Station is endeavoring loyally and faithfully to carry out the objects for which it was organized, and should prove a great blessing to the farmers of the State.

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seed, fertilizers, etc., from parties who do not seem to understand the

CHEMICAL LABORATORY OF THE STATION.

duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators, must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

DEGREES CONFERRED, 1893-4.

In Course.

BACHELORS OF ARTS.

Robert E. L Allen, of Tyler.
Joseph L. Henderson, of Monongalia.
Robert H. Ramsay, of Harrison.
Kemble White, of Marshall.
G. Fred. Dorsey, of Monongalia.
John Nuzum, of Jackson.
Geo. W. Johnson, of Jefferson.
John W. Wiles, of Preston.

BACHELORS OF SCIENCE.

Macker Babb, of Grant.
John T. Cooper, of Wood.

BACHELORS OF SCIENCE IN CIVIL ENGINEERING.

John W. Hughes, of Gilmer.
Samuel R. Jenkins, of Taylor.
Clement R. Jones, of Taylor.
Charles E. Krebs, of Wetzel.
John W. Paul, of Marion.

BACHELOR OF AGRICULTURE.

James M. Johnson, of Tyler.

BACHELORS OF LAWS.

G. W. Blume, of Doddridge.
H. B. Davenport, of Jefferson.
C. Hartmeyer, of Preston.
J. E. Galford, of Lewis.
G. W. Johnson, of Jefferson.
J. H. Lazear, of Ohio.
C. W. May, of Lincoln.
J. C. McWhorter, of Lewis.
Jerome Dudding, of Putnam.
H. A. Steed, of Wirt.
P. M Summers, of Clay.
J. H. Collins, of Pennsylvania.
S. Halsted, of Nicholas.
O. A Hood, of Grant.
C. A. Goodwin, of Monongalia.
W. B. Kittle, of Barbour.
I. Lowenstein, of Kanawha.
Wm. McDonald, of Mineral.
F. S. Miller, of Pennsylvania.
E. S. Nowlan, of Summers.
H. A. Summerville, of Wirt.
W. H. Sawyers, of Greenbrier.
C. Wilson, of Ritchie.

Honorary.

MASTER OF ARTS.

Hon. V. A. Lewis, State Superintendent of schools.

DOCTOR OF DIVINITY.

Rev. R. D. Roller	Charleston, W. Va.
Rev. W. E. Powell	arkersburg, W. Va.
Rev. J. S. W. Dean	

DOCTOR OF LITERATURE.

Howard N. Ogden	Chicago, Ill.

DOCTOR OF PHILOSOPHY.

Walter Hough	Smithsonian Institution.
H. Mc S. Gamble.	Moorefield, W. Va.
A. D. Hopkins	W. Va. Experiment Sta.

Register 1894-5.

Arnold, Walter S	Hartmansville	Mineral.
Arnold, Jackson	Arnold	Lewis.
Alexander, Lucius C	Frazier's Bottom	Putnam.
Alderson, George	Alderson	Monroe.
Annan, William D R.	Newburg	Preston.
Allen, Robert E. L	Lima	Tyler.
Aten, Lewis G	Letart	Mason.
Bush, Allen	Tanner	Gilmer.
Barrickman, Van A	Cassville	Monongalia.
Beall, Lewis D	Uniontown.	Pennsylvania.
Brand, Willa N	Morgantown	Monongalia.
Bernhardt, Tillie C	Uniontown	Pennsylvania.
Barnett, Leonidas H	Market	Doddridge.
Barb, Clyde D	Morgantown	Monongalia.
Bircher George C	Randall	Monongalia.
Babb, Francis H	Martin	Grant
Brownfield, George H	Fairmont	Marion.
Beall, Clarence H	Morgantown	Monongalia.
Baker, Julian C	Martinsburg	Berkeley.
Brooks, Earle A	French Creek	Upshur.
Bambrick, William C	New Cumberland	Hancock.
Bruner, William J	Wheeling	Ohio.
Brown, J. M. Guy	Morgantown	Monongalia.
Boyd, Samuel P.	Uniontown	Pennsylvania.
Berry, Bert W	Wheeling	Ohio.
Baker, William E	Beverly	Randolph.
Burchinal, Francis M	Morris X Roads	Pennsylvania.
Bird, Howard	Marlinton	Pocahontas.
Casto, D. Clarence	Rockport	Wood.
Cox, Frank C	West Liberty	Ohio.

Coplin, Boyd A	Market	Doddridge.
Cooper, Earl	Washington	Wood.
Cochran, Charles S	Morgantown	Monongalia.
Cole, Harry O	Seven Pines	Marion.
Carskadon, Edward B	Headsville	Mineral.
Cramer, Charles W	Piedmont	Mineral
Clark, Robert L	Union	Monroe.
Cutright, W. Bernard	Buckhannon	Upshur.
Chapman, William M	East Bank	Kanawha.
Carr, Percy H	Zanesville	O.
Cameron, Victor V	Morgantown	Monongalia.
Cameron, Earl H	Morgantown	Monongalia.
Cracraft, William A	Elm Grove	Ohio
Carrigan, Charles E	Sherrard	Marshall
Cochrane, David M	Morgantown	Monongalia.
Carmack, Allan B	Brownsville	Pennsylvania.
Clark, Clarence L	New Martinsville	Wetzel.
Clark, Friend E	New Martinsville	Wetzel.
Casto, D. Clate	Jackson	Jackson.
Core, Charles H	Pedler's Run	Monongalia.
Caldwell, Ralph C	Parkersburg	Wood.
Cox, Lawrence M	Morgantown	Monongalia.
Carter, Olin	Elk City	Barbour.
Colebank, Ora O	Stewartstown	Monongalia.
Colebank John L	Stewartstown	Monongalia.
Dorsey, Luther T	Morgantown	Monongalia.
Durst, Charles E	Wheeling	Ohio.
Dille, Elisha M	Morgantown	Monongalia.
Duncan, Samuel E	Oak Hill	Fayette.
Dailey, James T	Newburg	Preston.
Dent, Samuel M	Duke	Monongalia.
Dixon, James	West Liberty	Ohio.
Davisson, Claude E	Mt. Clare	Harrison.
Davis, Stephen R	Morgantown	Monongalia.
Deffenbaugh, Walter S	Smithfield	Pennsylvania.
Dille, T. Ray	Morgantown	Monongalia.
Davis, Fred A	Morgantown	Monongalia.
Davies, Thomas L	Point Pleasant	Mason.
Dean, William A	Morgantown	Monongalia.
Davenport, Joseph R	Brownstown	Kanawha.
Elliott, Charles S	Redstone	Pennsylvania.
Eaton, Harry A	Charleston	Kanawha.
Eddy, Alexander	Cross Roads	Monongalia.
Fox, Howard H	Wheeling	Ohio.
Frazier, John C	Frazier's Bottom	Putnam.
Friend, Lloyd L	Morgantown	Monongalia.
Fearnow, Martin L	Berkeley Springs	Morgan.
Gramm, George	Grafton	Taylor.
Goodwin, Elmer F	Bridgeport	Harrison.
Gorman, Michael E	Morgantown	Monongalia.
Greynolds, Lew	Beverly	Randolph.
Grant, Dale	Morgantown	Monongalia.
Grablachoff, Williko	Tulchas	Roumania.
Heavner, Ralph W	Buckhannon	Upshur.
Hamilton, Curtis	Fairmont	Marion.
Holland, Walter F	Randall	Monongalia.
Harvey, John S	Morgantown	Monongalia.

umphrey, Lewis E.	Belleville	Wood
ess, Harry E.	Laurel Point	Monongalia.
enry, Willie E	Laurel Point	Monongalia.
oly, G. H. Ferdinand	Grafton	Taylor.
ackney, John M	Morgantown	Monongalia.
olden, Charles F	Clarksburg	Harrison.
oard, Mame E	Hoard	Monongalia.
aught, Orestes L	Silver Hill	Wetzel.
aught, Thomas W	Conaway	Tyler.
all, Clark B	Morgantown	Monongalia.
oge, Patrick M	Martinsburg	Berkeley.
amrick, Troy	Switzer	Barbour.
owe, Rose B	Mt. Lake Park	Maryland.
olden, Arthur J	Bellows Falls	Vermont.
owe, James	Mt. Lake Park	Maryland.
all, Bryce H	Fairmont	Marion.
itchens, Charles P	Morgantown	Monongalia.
olden, William J	Craigmoor	Harrison.
ogsett, Samuel W	Hogsett	Mason.
oward, Leslie A	Connellsville	Pennsylvania.
iehle, Ernest	Parkersburg	Wood.
ickel, Thomas J	Richardson	Calhoun.
reland, Alonzo D	White Oak	Ritchie.
reland, Archibald J. W	Morgantown	Monongalia.
reland, Paul M	White Oak	Ritchie.
ce, William T., Jr.	Philippi	Barbour.
olliff, Clarence F	Uniontown	Wetzel.
amison, John H	Morgantown	Monongalia.
acob, Samuel S. Jr.	West Liberty	Ohio
ohnson, Thomas C	Long Reach	Tyler
aco, Linn M	Morgantown	Monongalia.
amison, George W	Morgantown	Monongalia.
ohn, William S	Rosedale	Pennsylvania.
ilmer, Wade C	Martinsburg	Berkeley.
eely, Josiah	Charleston	Kanawha.
nutti, John G	Alpena	Randolph
onrad, Philip	New Martinsville	Wetzel.
rebs, George R.	New Martinsville	Wetzel.
inkaid, Dell B	Knottsville	Taylor.
unst, George H. A	Pruntytown	Taylor.
unkle, Justin M	Morgantown	Monongalia.
unkle, Josie M.	Morgantown	Monongalia
nox, Roy J	Uniontown	Pennsylvania.
err, Charles P	Connellsville	Pennsylvania.
eyes, Thomas P	Keyser	Mineral.
endall, U. S G	Fairmont	Marion.
ee, Robert McW	Holliday's Cove	Hancock.
awhead, Berton M	Morgantown	Monongalia.
ong, James C	Connellsville	Pennsylvania.
emley, Plummer	Cassville	Monongalia.
owe, Scott C	Eldora	Marion.
ively, William E	Weston	Lewis.
owther, C Forest	New Martinsville	Wetzel.
eps, Henry M	Morgantown	Monongalia.
azier, James P	Morgantown	Monongalia.
angfite, James V	Eagle Mills	Doddridge.
arkin, Anna	Duke	Monongalia.
ovett, George G	Weston	Lewis.

Llewellyn, Lee	Morgantown	Monongalia.
Lowe, Frank K	Eldora	Marion.
Lavelle, Thomas M	Uniontown	Wetzel.
Lockridge, Horace M	Huntersville	Pocahontas.
Laughlin, Frank	Deer Park	Maryland.
Lazier, Henry B	Morgantown	Monongalia.
Leach, Elmer	Alderson	Monroe.
Longanecker, John C	Morgantown	Monongalia.
Morris, Mod.	Little's Mills	Tyler.
Moss, Hunter H., Jr	Parkersburg	Wood.
Maxwell, Claudius W	Parsons	Tucker.
Morford, Oliver P	Cassville	Monongalia.
McCauley, George W	Hanging Rock Mills	Hardy.
Madagan, Mary C	Morgantown	Monongalia.
Madagan, Nora B	Morgantown	Monongalia.
Morrison, Charles S., (A. M. Bethany College)	Wheeling	Ohio.
Morrison, Agnes J	Wheeling	Ohio.
Moreland, James R	Morgantown	Monongalia.
Mitchell, Fred D	Belleville	Wood.
Moreland, Eleanor B	Morgantown	Monongalia.
McCoy, Paul	Fairmont	Marion.
Madera, Haymond G	Morgantown	Monongalia.
McCoy, Charles E	Buffalo	Putnam.
Mansbach, Isaac	Cumberland	Maryland.
Moore, Bismark G	Proctor	Wetzel.
Mahaney, Lloyd, Jr	Uniontown	Pennsylvania.
Moore, Fred	Belington	Barbour.
Martin, Philip B	Herring	Preston.
McClure, Harry B	Braddock	Pennsylvania.
McBee, Perry C	Halleck	Monongalia.
Martin, Joseph W	Cassville	Monongalia.
McCollum, J. Reilly	Cairo	Ritchie.
Morris, Russell L	Huntington	Cabell.
McDonald, Julius T	Mann	Logan.
Masao, Tokichi (A. B. Univ. of Tokio)	Odzu	Japan.
Miller, Archie H	Fairmont	Marion.
Miller, Dwight E	Fairmont	Marion.
Naret, Edward L	Buffalo	Putnam.
Naret William F	Buffalo	Putnam.
Naret, Barbara	Buffalo	Putnam.
Nethken, Charles E	Elk Garden	Mineral.
Nelson, Jesse F	Capon Bridge	Hampshire.
Newcomer, Frank C	High House	Pennsylvania.
Neese, H Elmer	Buffalo	Putnam.
Osborn, Cuthbert A	Clarksburg	Harrison.
Orr, J. Morgan	Kingwood	Preston.
Ogden, Marshall W	Prospect Valley	Harrison.
Poe, Charles J	Buckhannon	Upshur
Patton, Harry W	Moundsville	Marshall.
Parsons, William O	Jackson	Jackson.
Patterson, Wm E (Ph. B., Mt. Union Coll. O.)	Bethesda	O.
Protzman, Jesse B.	Morgantown	Monongalia.
Pancake, William A	Romney	Hampshire.
Pancake, J. Finley	Romney	Hampshire.
Parsons, James D	Romney	Hampshire.
Pearcy, Evert M.	Normantown	Gilmer.
Patton George A	Dayton	O.

Porter, John D	Connellsville	Pa.
Protzman, Francis M.	Morgantown	Monongalia.
Protzman, Blanche.	Morgantown.	Monongalia.
Rane, John C.	Morgantown	Monongalia.
Robe, William L	Morgantown	Monongalia.
Reynolds, Edward B.	Keyser	Mineral.
Robb, Lewis J	New Cumberland.	Hancock.
Reichard, Lewis N.	Brownsville.	Pa.
Reynolds, Ethel T	Morgantown	Monongalia.
Rich, Hugh B.	Little Fal's.	Monongalia.
Rader, Arch F.	Enon	Nicholas.
Rowan, Frank	Beverly.	Randolph.
Reay, David C	Morgantown	Monongalia.
Reynolds, Mabel C	Morgantown	Monongalia.
Rice, Benjamin F., Jr.	Clarksburg	Harrison.
Ridgeway, Charles N	Maidsville	Monongalia.
Randolph, Ernest.	Salem.	Harrison.
Richardson, F. L	Little Falls.	Monongalia.
Swisher, Howard L	South Branch	Hampshire.
Standiford, William R.	Elm Grove.	Ohio.
St. Clair, Franklin J	Morgantown.	Monongalia.
Stewart, William E.	Morgantown	Monongalia.
Sanders, James C.	Maidsville.	Monongalia.
Scott, Buckner F	Terra Alta.	Preston.
Smyth Harry L.	Maidsville	Monongalia.
Swartzwelder, Albert S.	Pittsburg.	Pa.
Somerville, Edward J.	Point Pleasant	Mason
Stevens, William W.	Alderson	Monroe.
Stewart, Edgar	Martinsburg.	Berkeley.
Shanley, Emmet B	New Cumberland	Hancock.
Stout, W. Frank	Bridgeport	Harrison.
South, Walter H	Morgantown	Monongalia.
South, Winnifred O	Morgantown	Monongalia.
Stevenson, Alexander W	Blanch	Hancock.
Smith, Harvey F	West Milford	Harrison.
Shaw, Harry	Colfax	Marion.
Seip, Herman H	Pittsburg	Pennsylvania.
Stathers, Silas C	Wheeling	Ohio.
Smith, Oliver C	Masontown	Pennsylvania.
Sterling, Bruce F	Masontown	Pennsylvania.
Strader, Judson F	Beverly	Randolph.
St. Clair, Harry A	Stewartstown	Monongalia.
Stocking, George B	Sistersville	Tyler.
Scott, George B., (A. B., Ohio Wesleyan Uni.)	Womeldorf	Randolph.
Slonaker, Arthur B	Dillon's Run	Hampshire.
Turner, Joseph M	Kearneysville	Jefferson.
Thompson, Harley	Laurel Point	Monongalia.
Trippett, Jesse F	Morgantown	Monongalia.
Taylor, Lee Roy	Wadestown	Monongalia.
Talbott, Waitman T	Philippi	Barbour.
Thomas, Benjamin S	St. Albans	Kanawha.
Tompkins, Thomas S	Charleston	Kanawha.
Utt, Desmoines	Morgantown	Monongalia.
Vincent, George A	Nuzum's	Marion.
Vangilder, Lida E	Morgantown	Monongalia.
Wade, James S	Parkersburg	Wood.
Wood, Fred	Wheeling	Ohio.

Whetsell J. Hood	Arnoldsburg	Preston.
Walker, Ola L	Washington	Wood.
White, William J	Morgantown	Monongalia.
Wade, Ada B	Morgantown	Monongalia.
Wood, Lucy B	Morgantown	Monongalia.
Willey, Waitman T	Morgantown	Monongalia.
Waters, Leslie V	Morgantown	Monongalia.
Watson, James O., Jr.	Fairmont	Marion.
Waddell, Charles H	Wheeling	Ohio.
Willey, Guy A	Morgantown	Monongalia.
Wharton, Jesse L	Morgantown	Monongalia.
White, Stella S	Morgantown	Monongalia.
White, Anna B	Morgantown	Monongalia.
Willey, Chauncey D	Morgantown	Monongalia.
Whitescarver, Edward M	Pruntytown	Taylor.
Whitescarver, John S	Pruntytown	Taylor.
White, Bennett S	Morgantown	Monongalia.
Walker, Luther A	Mercer Salt Works	Summers.
White, Henry M	Camden	Lewis.
Wilson, Claude	Scrafford	Monongalia.
Wilson, John T. (M. E., Ind. State Normal)	Belleville	Pa.
Wilson, Richard T	Viola	Marshall.
Wolfhope, Frank	New Baltimore	Pa.
Yoho, Robert C	Roseby's Rock	Marshall.
Total		283
Largest enrollment heretofore (1893-4)		244

SUMMARIES.

1. By Schools.

ENGLISH.

Preparatory	85
1 Collegiate	7
2 Collegiate	29
3 Collegiate	14
4 Collegiate	14

MATHEMATICS.

Preparatory	99
1 Collegiate (Scientific)	12
1 Collegiate (Classical)	17
2 Collegiate	9
3 Collegiate	7

ANCIENT LANGUAGES.

Preparatory Latin	89
Preparatory Greek	5
Collegiate Latin	29
Collegiate Greek	15

MODERN LANGUAGES.

1 French	13
2 French	23
3 French	2
1 German	26
2 German	8

CHEMISTRY AND PHYSICS.

General Chemistry	49
Analytical Chemistry	10
General Physics	37
Advanced Physics	5

BIOLOGY.

Physiology	50
Anatomy (special advanced)	20
Field Botany	43
Structural Botany	7
Zoology	30

GEOLOGY.

General Geology	
Economic Geology	4
Mineralogy	14
Physical Geography	10

METAPHYSICS AND POLITICAL SCIENCE.

Elementary Metaphysics	26
Advanced Metaphysics	21
History and Science of Government	35
Economics	26

CIVIL ENGINEERING.

All Branches	33

MECHANICAL ENGINEERING.

All Branches	25

AGRICULTURE AND HORTICULTURE.

All branches	13

LAW.

All branches	62

MILITARY SCIENCE.

(See Roster of Cadets.)

SPECIAL COURSES.

Pedagogy	20
Book-keeping	25

2. By States.

West Virginia	249
Pennsylvania	24
Ohio	3
Maryland	4
Vermont	1
Japan	1
Roumania	1

3. By Counties in West Virginia.

Barbour	5	Mason	4
Berkeley	4	Mineral	6
Cabell	1	Monongalia	90
Calhoun	1	Monroe	4
Doddridge	3	Morgan	1
Fayette	1	Nicholas	1
Gilmer	2	Ohio	14
Grant	1	Pocahontas	2
Hampshire	6	Preston	6
Hancock	4	Putnam	7
Hardy	1	Randolph	6
Harrison	10	Ritchie	3
Jackson	2	Summers	1
Jefferson	1	Taylor	6
Kanawha	6	Tucker	1
Lewis	4	Tyler	5
Logan	1	Upshur	4
Marion	13	Wetzel	9
Marshall	4	Wood	9

*This number includes several who have taken up their residence in Morgantown in order to attend the University.

4. By Sex.

Males	263
Females	20

West Virginia University

Catalogue 1895-6

MIDWINTER.

SHADY WALK.

SANDERS CO. ST. LOUIS

WEST VIRGINIA UNIVERSITY.

Catalogue

WEST VIRGINIA UNIVERSITY

1895-96

University Calendar.

The University year consists of three terms. For the year 1896-7, these begin as follows: 1—Fall Term, Wednesday, September 11, 1896; 2—Winter Term, Monday, January 5, 1897; 3—Spring Term, Friday, April 1, 1897.

1896.

May 29—June 6th—Final Examinations.

Saturday, June 6th, 8 P. M., Moot-Court: Breach of Promise Case; Margarite Curtis Washington vs. Richard Henry Lee.

Sunday, June 7th, 11 A. M., Baccalaureate Sermon, by Rev. James S. Ramsay, D. D., New York City, Pastor of Harlem Presbyterian Church.

Monday, June 8th, 2 P. M., Company Competition for Corps Colors.

Monday, June 8th, 8 P. M., Regents' Prize Declamation.

Tuesday, June 9th, 2 P. M., Competitive Drill for Gold Medal; followed by the Ceremonies of Presenting Medals.

Tuesday, June 9th, 8 P. M., Annual Contest between Literary Societies.

Wednesday, June 10th, 10 A. M., Annual Commencement.

Wednesday, June 10th, 2 P. M., Public Field Sports.

Vacation.

Fall Term begins September 11, Wednesday, 9 A. M.—Opened with an Address by a Member of the Faculty.

Thanksgiving Recess, November 25, Wednesday, 1 P. M.

Exercises Resumed—November 30, Monday, 8:15 A. M.

Examinations of Fall Term—Dec. 12th-21st.

Vacation till January 4, 1897.

1897.

Winter Term begins—January 4, 1897, Monday, 8:15 A. M.

Washington's Birthday—Feb. 22, 1897, Monday.

Examinations of Winter Term—March 21st-29th.

Spring Term Begins—April 1, 1897, Friday, 8:15 A. M.

Examinations of Spring Term—May 27th—June 4th.

Commencement—June 8th.

Board of Regents.

FOR TWO YEARS.

S. F. Reed, Clarksburg. E. P. Rucker, Welch.
W. E Haymond, Sutton.

FOR FOUR YEARS.

C. B. Hart, Wheeling. Jas. H. Stewart, Raymond City.
Jas. F. Brown, Charleston.

FOR SIX YEARS.

John A. Robinson, Patterson's Depot. C. L. Smith, Fairmont.
Geo. F. Evans, Martinsburg.

Officers of the Board of Regents.

John A. Robinson ..... President.
A. R. Whitehill ..... Treasurer.
S. B. Brown ..... Secretary.
Jos. Moreland ..... Auditor.
Jno. A. Myers ..... Sup't Buildings and Grounds.

Executive Committee.

Col. John A. Robinson, *Chairman*,
Col. C. L. Smith ..... Hon. S. F. Reed.

Experiment Station Committee.

Col. John A. Robinson, *Chairman*,
Hon. Chas. Burdett Hart ..... Hon. W. E. Haymond.

The President's Office

FACULTY.

J. L. Goodknight, D. D., President.

P. B. Reynolds, D. D., Vice President,
Professor of Metaphysics and Political Science.

John I. Harvey, A. M., Ph. D.,
Professor of Modern Languages.

Okey Johnson, A. M., LL. B.
(Late President of the Supreme Court of West Virginia).
Dean of the Law College; Professor of Constitutional, International and Corporation Laws; Criminal Laws and Criminal Procedure.

St. George T. Brooke, LL. D.,
Professor of Common and Statute Law.

William P. Willey, A. M.,
Professor of Equity Jurisprudence and Commercial Law.

Alex. R. Whitehill, Ph. D.,
Professor of Chemistry and Physics.

Jas. W. Hartigan, A. M., M. D., F. S. S., F. R. M. S., G. O.,
Professor of Biology and Director of Physical Training School.

John L. Johnston, C. E.,
Head of the Civil and Mining Engineering School; Professor of Civil and Mining Engineering.

J. L. Johnston, C. E.,
Professor of Applied Mathematics and Drawing.

SAMUEL B. BROWN, A. M.,
Secretary to the Board of Regents; Professor of Geology and Mineralogy.

JOHN A. MYERS, A. M., PH. D.,
Director of the Experiment Station, and Dean of the Agricultural College.
Professor of Agricultural Chemistry.

ROBERT A. ARMSTRONG, A. M.,
Secretary and Registrar to the University Faculty.
Professor of English.

THOS. C. MILLER, A. M.,
Professor of Pedagogy and Principal of the Preparatory Department.

L. C. CORBETT, B. S.,
Professor of Agriculture and Horticulture.

WILLIAM S. ALDRICH, M. E.,
Dean of the College of Engineering and the Mechanic Arts; Head of the School of Mechanical Engineering and the Mechanic Arts.
Professor of Mechanical Engineering.

JAS. S. STEWART, M. S.,
Professor of Mathematics.

R. W. DOUTHAT, A. M., PH. D.,
Professor of Ancient Languages.

CAPT. C. C. HEWITT, 19TH INFANTRY, U. S. A.,
Commandant of Cadets, and Secretary of the Preparatory Faculty.
Professor of Military Science and Tactics.

A. J. HARE, A. B.,
Professor of Preparatory Ancient Languages, and Mathematics.

W. BERNARD CUTRIGHT, A. B., B. P.,
Assistant in Preparatory School.

RUSSELL L. MORRIS, B. S. C. E.,
Assistant in Civil and Mining Engineering.

Clement R. Jones, B. S. C. E.,
Assistant in Mechanical Engineering.

D. M. Willis,
Principal of Commercial School.
Professor of Commercial Branches.

A. D. Hopkins, Ph. D.,
Professor of Entomology.

B. H. Hite, M. S.,
Professor of Organic Chemistry.

W. E. Rumsey, B. S. Agr.,
Assistant Professor of Entomology and Economic Botany.

Waitman Barbe, M. S.
Field Agent of the University.

Miss Clara Hough,
University Librarian.

Experiment Station.

OFFICIAL STAFF.

John A. Myers, Ph. D.....Director.
L. C. Corbett, B. S., B. Agr..Agr. and Hort. and Microscopist.
Bert H. Hite, M. S.....Chemist.
T. F. Watson.....Assistant Chemist.
A. D. Hopkins, Ph. D.....Entomologist.
W. E. Rumsey, B. Agr.....Assistant Entomologist.
Miss M. E. Heermans.....Stenographer and Bookkeeper.
Mrs. S. M. Houston.....Librarian.

The Athenæum.

L. L. Friend and H. L. Swisher, *Editors and Managers.*

THE UNIVERSITY.

Origin.

The West Virginia University was established by act of the Legislature, February 2, 1867. It was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Script," donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each state of an Agricultural College, were given to this College, and constituted a part of the endowment fund. By a subsequent act of the Legislature, the name of the institution was changed to "West Virginia University." Authority was given to the Board of Regents to establish professional Colleges and Schools, and to enlarge the scope of the work to that of a University.

Location.

An ideal location, at the beautiful town of Morgantown, on the Monongahela river and B. & O. railroad, in a community pure and healthful morally, physically and intellectually. There are strong churches of the various denominations in the town and a Y. M. C. A. in the University. There are no saloons in the town and have been none for several years. The town has the advantages of pure, soft mountain water; and an abundance of natural gas and electric lights.

Morgantown is on the Fairmont, Morgantown and Pittsburg railroad, connecting it southward at Fairmont and Grafton with all railroad lines running through the State, and northward with Pennsylvania routes. Daily packets run from Pittsburg to Morgantown, on the Monongahela river.

University Hall

PLANT.

1. Grounds.

The University grounds, about eighteen acres in extent, occupy an elevated and healthful position overlooking the Monongahela river, and command a beautiful view of the surrounding country. They afford a campus, sites and surroundings for the various buildings, grounds for the military drill and outdoor athletics, groves, etc. The Experiment Station has a farm a short distance from the town.

2. Buildings.

There are six principal buildings, all of brick and four new. They are admirably adapted to their purposes, and have cost, with their equipment, more than $250,000. They are the following:

(1.) Two large buildings, three stories and a basement each, for class rooms, Library, Biological Department, Museum, Society Halls, Offices, &c.

(2.) The Scientific Building finished and equipped in the summer of 1893; affording lecture rooms, laboratories, &c., for the departments of Chemistry, Physics, Geology, Civil Engineering and Arts.

(3.) The Mechanical Hall affords shops, machinery, appliances, &c., for instruction in Mechanical Engineering and the Mechanic Arts. An addition made to this building doubles its capacity. The machinery cost $40,000.

(4.) The Commencement Hall furnishes room for a commodious and beautiful Chapel, a Drill Hall and a Gymnasium.

(5.) The Agricultural Experiment Station is a part of the University and forms, with its libraries, laboratories, and other equipments, an invaluable adjunct to the University. This building has been remodeled and doubled in extent, and is one of the handsomest and best equipped Experiment Stations in the United States.

3. Equipment.

The apparatus for instruction in Civil, Mining and Mechanical Engineering, Chemistry, Physics, Biology and Geology, has been made to order and is pronounced by experts to be equal to the best in the country. The apparatus for the various other departments is being constantly increased and improved.

The Library contains standard works in all departments of literature, books of reference needed in all branches of work in the University, and a Reading Room furnished with the best papers and magazines. Additions are made to the library every year.

The Gymnasium is fitted up with the best modern appliances, is under the management of a competent director, and is provided with all the facilities necessary for exercise and physical development.

The Experiment Station has organic connection with the University, and its able director and staff, its equipment, its chemical, botanical, entomological, horticultural and agricultural work and experiments should be reckoned among the facilities for education at the University.

Funds.

Funds for maintaining the University are derived from the interest on an endowment of $114,750, from biennial appropriations made by the State Legislature, and from the "Morrill Fund," appropriated by act of Congress August 30, 1890, for the further endowment of Agricultural Colleges, from which the University receives this year, after deducting the amount that goes to the support of the State Institute for colored youth, the sum of $17,000, and which will yield $20,000 per year for University support after two more years.

Grounds and Some of the Buildings.

REQUIREMENTS.

1. Admission.

In order to be admitted to the courses in the Colleges, the candidates must stand a satisfactory examination in the studies preparatory to such courses, or otherwise give sufficient evidence of the necessary proficiency in them.

Graduates of the Academic Department of the Normal School or any of its branches, or from approved High Schools and Academies, are admitted to Academic Collegiate courses without examination, upon presentation of a proper certificate of such graduation.

Students who wish to take "advanced standing" in college courses, upon credit for work done elsewhere, must apply to the Deans of the various Faculties for permission to take such standing, and then must satisfy the professors in whose courses they wish credit given, by examination or otherwise, that they have done the work required in these courses or a full equivalent therefor.

A candidate must get from the President a written permit to matriculate must have the Treasurer's receipt for the payment of all dues; must be admitted to the required number of classes and have the certificates of professors that he is so admitted; and must be enrolled by the Registrar of the University Faculty.

Matriculation is a pledge to obey the rules and regulations of the University, and it will be so construed and the matriculate required to fulfill it.

The student must obtain the President's permission to enroll for every term; must obtain the Treasurer's receipt for all fees for each term, and be enrolled by the Registrar for that term, before he will be allowed to go on with the studies.

Students must enroll immediately upon their arrival at the University, and re-enroll promptly at the beginning of the terms, or render a satisfactory reason for the delay.

Female students are admitted under the same regulations as male students except that they are not permitted to take the studies of the Preparatory School.

2. Work.

Students must select their studies under the direction of their advisers and may not have fewer than sixteen and not more than twenty recitations per week, unless they have special permission to take a smaller or a larger amount of work.

Students must enter one of the regular courses, unless they are permitted for good reasons to take an irregular or special course.

Students must pursue the courses they have entered and remain in the classes in which they have been enrolled, until they have the consent of their advisers or are permitted to change or abandon their work by the particular College Faculty. All such changes must be reported to the President that he may report them to the University Faculty.

3. Grades.

In order to be promoted from a lower to a higher class, or to get credit for having completed any subject in any course, students must make an average of 7 on a scale of 10 for each term given to the subject.

Grades are made up from an average of recitation and examination values, each counting one-half.

Examinations are held at the close of each term, and at such other times as professors may deem necessary. The time allowed for each examination is not *less than three nor more than five hours.* Upon failure to pass, a second examination will be granted only by special permission of the particular faculty. Absence from examination will be excused only when proof is given that such absence is unavoidable. In case of an excused absence from examination, if the recitation value equals 8.50, the student will not be required to stand an examination.

All absences, from whatever cause, are counted against the student in making up his grade; except that he may be excused for absences in any class for a term, upon presenting to the particular faculty sufficient reasons for the absences, and making up the work done by the class while he was absent.

4. Discipline.

The rules and regulations which students are required to observe are few, simple and reasonable. Punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; abstinence from drinking, gambling and like gross vices; and civil, orderly conduct generally. These are deemed sufficient, and are all that will be exacted.

Students who can not, or will not, comply with these requirements will not be allowed to remain in the University. Offenders will be warned, and will be given reasonable time to correct their conduct; if they do not amend, they will be dismissed.

ADVISERS.

Every student will be assigned to a certain Professor as his adviser who will council and direct the student in all matters pertaining to his studies. The adviser will be a personal friend to the students assigned to him. Each student will consult his adviser as to the course of study best suited to the student. No student will be permitted to change his course of study without the permission of his adviser. The conduct of the student while at the University will be under the immediate supervision of his adviser.

5. Religious Worship.

The daily work of the University is begun with short, appropriate religious exercises in the Chapel. All students are required to be present at roll-call but are not compelled against their will to remain for the religious exercises, although they are urged to stay. Students, unless excused, are also required to attend some church at least once on the Sabbath.

The different denominations have their churches, pastors and Sunday schools in the town, and these are means of good influence over the students.

Students of age, and minors through their parents or guardians, are exempted from the above requirements, when they can give reasonable evidence that such requirements are against their conscientious religious convictions.

AUXILIARIES.

1. Regents' Prizes.

The Regents' Prize of $25.00 for Essay is given to any member of the regular University departments, who shall write the best essay on a subject selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. The manuscript of each competitor shall be in his own handwriting.
2. Each essay shall have a fictitious signature, and be accompanied by a sealed letter containing both the fictitious and real name of the writer.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.
4. The successful competitor shall read his essay in public at such time as the Faculty may direct.

The Regents' Prize for declamation will be presented to any student whose studies are principally in the Preparatory Department, and for the best declamation. The award is made by a committee appointed by the President of the Board of Regents.

2. Athletics.

Besides the regular course in Physical Training and optional Gymnasium courses, sufficient attention is given to and sufficient provision is made for base-ball, foot-ball, and other athletic sports, in both home and inter-collegiate exercises, to meet all the requirements for a due degree of physical development.

3. Library and Reading Room.

Students will find great advantage in using as extensively as possible the Library and Reading room. These are open every day in the week during University hours—8:30 to 12:00, and 2:00 to 5:00. They are free to all students who comply with the regulations. These regulations are posted in the Library, or can be obtained of the Librarian.

Cafe of the Literary Society, U. B.

4. Literary Societies.

There are, in connection with the University, two flourishing literary societies, the Parthenon and the Columbian. The exercises, consisting of compositions, readings, declamations, orations, debates and criticisms, are invaluable to students. These societies have an annual contest, during Commencement week, in declamation, essay, oration and debate, for prizes aggregating $100. All students should connect themselves with one of these societies, and perform faithfully all the work required of the members.

5. Engineering Society.

The object of this society is to encourage the investigation of, and facilitate an acquaintance with and mastery of, engineering topics. Its exercises, consisting of essays, discussions, original researches, etc., are of great value to students pursuing a course in engineering.

6. Y. M. C. A.

The Young Men's Christian Association is doing, successfully, an important work. It is in a flourishing condition and is very active. The Faculty recognize its great service in maintaining the discipline of a high standard of character in the University. It meets every Friday evening, from 6 to 7 o'clock, for devotional exercises and business. Students who are seeking the highest culture, should connect themselves with this association and engage actively in all its work.

EXPENSES.

1. Tuition.

Tuition is free to West Virginia students in all the departments of the University. Students from other states are charged $5.00 per term in the Preparatory school, $8.00 per term in the Law College and $12.50 per term in other University courses and Colleges.

2. Fees.

The matriculation fee is $5.00, payable upon entering the University by all students. It is paid but once. The contingent fee for each term is $2.00, payable at the beginning of the term. State cadets are exempted from these fees. The other fees are a laboratory fee of $2.00 for students in general chemistry; a fee of $5.00 for students in special anatomy, to cover cost of material used; a fee of $20.00 for students in analytical chemistry, to cover cost of materials; and a fee of $5.00 for a diploma upon graduation. Unless a student remains out of the University over three years, the matriculation fee is paid only once.

3. Board and Lodging.

Furnished rooms cost each student from 75 cts. to $1.25 per week. The average is $1.00 per week. Students lodge with private families. Board, in students' clubs, costs from $1.75 to $2.25 per week; in private families, from $2.00 to $3.00 per week.

Bishop Peterkin, of the Episcopal Church, has established a Hall where students may find a home. This is in charge of the resident Rector, Rev. Mr. Sheerin. Students of all denominations are admitted, so long as there is room. Parents and students will do well to write to the Rector for terms and places.

It is desired and expected that other denominations will establish like Halls in the near future. This would be a satisfactory solution of the dormitory question in connection with State Universities.

No greater moral and spiritual blessing could come to the State Universities than to be surrounded by a system of Denominational Halls to take care of the

social and moral life of the young people who gather in such numbers at the State Universities. It is time the various denominations should come to the students already in the State Universities as well as try to bring students to denominational colleges. It will cost the denominations far less to do the former than the latter.

4. Incidentals.

Lights, washing, text-books and incidentals cannot be correctly estimated, but will cost as little as at any other school of the same grade. Washing costs about $1.00 per month. The cost of incidentals depends largely upon the tastes and habits of the student.

State Cadets get the use of their text-books and stationery free.

5. Estimate.

Room rent	$ 7.00	to	$45.00
Board	63.00	"	90.00
Washing	9.00	"	13.00
Incidentals	20.00	"	20.00
Text-Books	8.00	"	30.00
Contingent fees	6.00	"	6.00
	$137.00	to	$204.00

To this must be added matriculation and tuition fees, if they are required, and travelling expenses, clothing, etc.

Text-books are kept for sale at the University, and are furnished to students at cost.

ORGANIZATION.

"The great function of a University," says Fitch, an eminent English educator, "is to teach, and to supply the world with its teachers." Doubtless, in this statement, he means to refer to all kinds of professional work, as law, medicine, theology, agriculture, engineering, commerce, etc.; but in a larger sense is this true of the work of a University as it stands related to the direct instruction of the school room, which necessarily lays the foundation for all intellectual pursuits. From the academies, seminaries, normals and high schools, come the young men and women who enter our higher institutions of learning and who afterwards go out as leaders in thought and action. The Universities supply the secondary schools with their instructors, and these schools in turn feed the Universities. How much friction may be avoided; how many irregularities corrected; how much valuable time saved, by having a proper adjustment and correlation of all these educational forces.

This University is organized into Colleges. These are divided into Schools, and the Schools into Departments. There are four Special Schools.

There are four Colleges: Academic College, with a special Department in Medicine; Agricultural College; Law College; Engineering College; and four Schools; Physical Training; Military College; School of Pedagogy; Commercial School. For a complete and detailed description of each and its work, examine the announcements of the several Colleges and Schools in their appropriate places in this catalogue.

The Preparatory School is primarily for fitting students to enter the several Colleges of the University.

Preparatory Building and Corner of University Hall.

COURSES OF INSTRUCTION.

Preparatory School.

FACULTY.

J. L. Goodknight, D. D., *President.*
Thos. C. Miller, A. M., *Principal.*
A. J. Hare, A. B.
J. W. Hartigan, A. M., M. D.
W. B. Cutright, A. B.
Dennis M. Willis.
Capt. C. C. Hewitt, 19th Infantry, U. S. A.

The Preparatory School is maintained to prepare young men for the various courses of the University, and it offers excellent opportunities for both mental and moral development under helpful guidance. Those who have not the advantage of an Academy or good High School near home, may here receive instruction in any of the common branches, thus fitting themselves either for college or business life. Usually most of the students in this school are enrolled in the Cadet Corps, and the habits of neatness, accuracy, and of mental and bodily discipline inculcated therein, are an invaluable part of a young man's training.

Students who are deficient in only one or two branches of this School, may, while finishing this work, take some academic studies. But all the required work of the Preparatory course must be completed before a student is permitted to go on regularly into any University course. Those who do not expect to take any course in the University will be given such studies as they are able to pursue successfully ; so far as such studies are provided for in the course and do not interfere with any of the regular work of the School.

The control of this School is vested in a Preparatory Faculty, consisting of the President, the Principal and his assistants, the Commandant of Cadets and the Instructor in Physical Culture, and all students in the School are under the control of this Faculty so far as their work is in the School. All matters of discipline involving suspension or expulsion from the University are determined by the University Faculty.

ADMISSION.

For ad nission to this School, applicants must be at least fifteen years of age, and they should present a certificate of scholarship from their last instructor or the last school with which they were connected. They should be proficient in the ordinary course of study pursued in the public schools of the State, and especially in English grammar and arithmetic. No regular examination is required for admission to the classes of the Junior year, the student being admitted on trial, and if he is not able to pursue the course successfully. he is required to withdraw. Students desiring to take the studies of the Senior Preparatory year will be examined as to their ability to enter the classes of that year.

No student will be permitted to enter any higher class or section until he shall have passed in the lower, or shown by special examination that he is able to go on satisfactorily.

The work in this school is so arranged as to enable students to take the course in the shortest time consistent with the attainment of the required proficiency. Students who, upon entering, can take advanced standing, and who are capable of making good progress, may finish the course in one year. When they do not lack much of the course, they may even finish it in one or two terms. Students who must take the course from the beginning, and who cannot make rapid progress, may find it necessary to give two years, or even more, to the work of the department. In order that a student may complete the mathematics of this school in two years, he must be well along in arithmetic, and it will be better that he possess some knowledge of algebra. The average student who must spend more than half his first year in arithmetic cannot satisfactorily complete the algebra and geometry required in the remainder of the time allotted.

Classification and Grading.

The classes of the Junior preparatory year are usually taught in two or three sections; at the end of each term the sections are rearranged *according to scholarship*, and those who are not proficient are required to go over the work again, or given special instruction adapted to their needs.

Recitations are estimated on a scale running from 10 to 0, 10 being perfect

Library and Preparatory Building.

and 7 passable. A student falling below 7 in his average standing, which is reckoned from his daily class marking and his term examination, will be required to take the same subject again.

Schedule of Recitations.

As all the sections of each branch of study cannot recite at the same hour, the schedule will be arranged when the classes are formed. As far as possible, the following order will be observed:

First Hour, 8:30, Mathematics.
Second Hour, 9:30, English.
Third Hour, 10:30, Second Latin; El. Science, and History.
Fourth Hour, 11:30, First Latin.
Drawing and Mechanic Arts, afternoons and Saturdays.

COURSE OF STUDY.

The course of study in this school is based upon the following general outline:

English.

Junior Year: English Grammar, Whitney, 5 hours a week, half the year. Analysis, Reed and Kellogg, 5 hours a week, half the year.

Senior Year: Elements of English, Lockwood, 5 hours a week, half the year. Composition and Rhetoric, Waddy, 5 hours a week, half the year.

Ability to analyze and parse English sentences correctly, and to apply the rules for orthography, the use of capitals, punctuation, invention, &c., in ordinary composition, is the standard required.

Mathematics.

Junior Year: Arithmetic, Greenleaf, 5 hours a week, half the year. Algebra, Milne, 5 hours a week, half the year.

Senior Year: Algebra, Wells University, 5 hours a week, half the year. Plane Geometry, Wells, 5 hours a week, half the year.

Proficiency in Algebra to Logarithms or Theory of Equations and in Plane Geometry is the standard required.

Latin.

Junior Year: Latin lessons, Chase and Stuart, 5 hours a week throughout the year.

Senior Year: Reading from Cæsar, Cicero and Virgil, with constant drills in forms and exercise writing, 5 hours a week throughout the year.

Ability to read ordinary Latin prose and poetry, to explain grammatical forms and give rules for ordinary Latin constructions, and to apply the rules for forms and constructions in writing ordinary Latin prose exercises, is the standard required.

In addition to the above, or as a substitute for Latin, all students preparing

for the Agricultural, Commercial and Engineering Courses are required to take the following:

Junior Year: U. S. History, 3 hours a week. Elementary Book-keeping, 2 hours a week, throughout the year.

Senior Year: Botany, Physiology and Hygiene, 3 hours a week. Physical Geography, 2 hours a week, throughout the year. Industrial Drawing, 1 exercise a week, 2 hours.

Friday, 2–4 P. M.

Mechanic Arts, 1 Period, 3 hours a week, Saturday forenoon.

Preparatory students may also take Penmanship, which will count as a part of their course in the Commercial School.

COLLEGE OF THE ARTS AND SCIENCES.

VICE PRESIDENT REYNOLDS, *Dean.*

The control of this College is vested in the Faculty, consisting of the President, *ex-officio* member, the Vice-President as Dean, and all the Academic Professors in charge of the several Schools of this College.

All students in this College are under the control of this Faculty, so far as their work is in this College.

All matters of discipline involving suspension, dismission or expulsion from this College or the University, are determined finally by the University Faculty.

This College is composed of nine Academic Schools, viz: English, Mathematics, Ancient Languages, Modern Languages, Chemistry and Physics, Biology, Geology, Metaphysics and Political Science. The courses in these several schools are described in the following announcements.

Science Hall and University Hall.

ENGLISH.

PROFESSOR ARMSTRONG.

Minor Course.

SECTION I.

English Language and Literature. 3 hours.

History and growth of the English Language; History of English and American Literature; Class Study of Masterpieces; and Prescribed Course of Collateral Reading.

SECTION II.

Rhetoric and Theme-writing. 2 hours.

Rhetoric, Theoretical and Practical; Close Study of the Principles of Rhetoric; Weekly Themes; Class Discussion of Themes.

Major Course.

SECTION I.

English Literature and Literary Criticism. 3 hours.

Recitations, Reports, Critiques, Reviews, Critical Class Readings, and Prescribed Collateral Readings.

The object of this course is to give the student a taste of many of the classics of English and American Literature. He has already taken a general survey of the field of literature, and is now prepared for work more special and fairly critical.

SECTION II.

Theme-writing and Criticism. 2 hours.

An advanced Course in Rhetoric, Rhetorical Analysis, and Theme-writing.

Special Courses.

I. *Anglo-Saxon.* 2 hours.

Anglo-Saxon Grammar, Translation and Etymological Study of Poetic and Prose Selections.

II. *Shakespeare.* 2 hours.

Class Readings, Critiques, and Collateral Readings. All the plays will be read in the year; a few will be studied closely and critically.

III. *Reading Course.* 2 hours.

Class Readings, Critiques, Reports, and Collateral Reading.
Course for '96–97: Study of the American Poets.

IV. *English Philology.* 2 hours.

A study of the origin, and history of English words by means of Recitations, Readings, and Discussions.

V. *The Bible.* 1 hour.

A brief study of the Bible as Literature.

The major and minor courses present work that is required for academic and professional degrees. The special courses present elective work.

The courses must be taken in order. Students who have completed the minor course may be admitted to some of the special courses.

There can be no admission to advanced courses except on examination in the preceding work or its equivalent.

The class hours of the courses are as follows:

MINOR COURSE. { Section I. Monday, Wednesday and Friday—8:30.
Section II. Tuesday and Thursday—10:30.

MAJOR COURSE. { Section I. Monday, Wednesday, and Friday—10:30.
Section II. Tuesday and Thursday—8:30.

Science Hall.

Entrance Requirements.

Candidates are admitted by examination or by certificate. Certificates of approved schools only will be accepted; and these schools must do all the work outlined in the following requirements, or its full equivalent.

The requirements will be the same as those adopted by the Committee of Ten of the Association of Colleges and Preparatory Schools of the Middle States and Maryland.

The Preparatory work is of two kinds: 1, Reading; 2, Study and Practice.

The books set for examination in 1896, are: Reading: A Midsummer Night's Dream; Defoe's History of the Plague; Irving's Tales of a Traveler; Scott's Woodstock; Macaulay's Essay on Milton; Longfellow's Evangeline; George Elliot's Silas Marner. Close Study: Shakespeare's Merchant of Venice; Milton's L'Allegro, Il. Penseroso, Comus, and Lycidas; Macaulay's Essay on Addison.

In the examination on the readings the candidates will be required to present evidence of a general knowledge of the subject matter, and to answer simple questions on the lives of the authors.

In the second part the examination will be on subject matter, form and structure.

There will be incidentally an examination in the essentials of English Grammar; and no candidate will be accepted whose work is notably defective in point of spelling, punctuation, or division into paragraphs.

MODERN LANGUAGES

PROFESSOR HARVEY.

In this school are taught French and German. In each language there are two courses, a Minor and a Major.

In the Minor Courses the student is drilled in the accidence of the language and in some of the simpler forms of Syntax.

In the Major Courses attention is paid more especially to the Syntax, History and Literature of the language.

Instruction is given by recitations and familiar conversations upon approved text-books. Frequent exercises are required of all classes. Besides the regular class-room work, an extra private course in reading will be prescribed and required in the Major Courses.

Students who desire to enter this school must have a thorough knowledge of the elements of English Grammar, and have completed the course in Latin prescribed for the Preparatory Department.

MINOR FRENCH.—Five times a week throughout the year.

Fall Term: Whitney's or Edgren's Grammar, Super's or Whitney's Reader.

Winter Term: Grammar Continued, Reader continued.

Spring Term: Halevy's L'Abbe Constantin or selections from modern authors.

MINOR GERMAN.—Five times a week throughout the year.

Fall Term: Joynes—Messner's or Thomas's Grammar, Joynes' or Harris's Reader.

Winter Term: Grammar continued, Reader continued.

Spring Term: Grammar continued, Schiller's Jungfrau von Orleans or other selections.

A Corner of the Library.

MAJOR FRENCH.—Three times a week throughout the year.

Fall Term: Souvestre's Philosophe Sous Les Toits, Grammar and exercises.

Winter Term: Selections from Corneille, Racine and Molliere, Grammar and exercises.

Spring Term: Selections from Hugo, Balzac and others, Saintbury's Literature.

MAJOR GERMAN —

Fall Term: Riehl's Culturgeschichtliche Novellen, or other selections, Grammar and exercises.

Winter Term: Goethe's Iphigenie and Hermann und Dorothea, or other selections, Grammar and exercises.

Spring Term: Lessing's Nathan der Weise or other selections, Hosmer's Literature.

ANCIENT LANGUAGES.

PROFESSOR DOUTHAT.

Time for regular classes, Minors, 11:30-12:30.
Time for regular classes, Majors, 9:30-10 30.
Both years required for A. B.
Time for Specials, 8:30-9:30.
Time for Electives, 10:30 to 11:30, or vice versa.
First Section: Greek Classes, Mondays, Wednesdays and Fridays.
Second Section: Tuesdays and Thursdays.
Requirements for admission to the Minor Latin are:

A thorough knowledge of the principles of Latin Grammar; ability to write ordinary Latin prose; facility in reading such prose as that of Nepos, Cæsar and Cicero, and the reading of not less than two books of the Æneid. Students who can pass an examination on the Minor Latin will be admitted to the Major Course.

REGULAR WORK IN THE LATIN.

Minors.

Fall Term: Virgil's Eclogues and Georgics, Ovid or Catullus.
Winter Term: Horace's Odes.
Spring Term: Aulus Gellius' Stories, or Cicero's De Amicitia.
Prose composition throughout the year.
Scanning frequent.

Majors.

Fall Term: Livy.
Winter Term: Horace's Satires and Epistles.
Spring Term: Cicero's Letters, de Officiis or de Oratore.
Prose composition and sight reading.
Scanning frequent.

Specials.

Fall Term: Early Latin, Allen's Remnants and Merry's Fragments.
Winter Term: Plautus or Terence.
Spring Term: Juneval or Pliny's Letters.
Scanning and special exercises.

Electives.

Fall Term: Tacitus, Germania and Agricola.
I.—*Winter Term:* Quintilian, 10th and 12th books.
Spring Term: Seneca, Select Letters.
Special Exercises.
II.—Sanscrit and Comparative Philology.

REGULAR WORK IN THE GREEK.

Minors.

No preparation is required to enter the Greek. Greek begins in the College Course as here outlined.

Fall Term: Xenophon's Anabasis and Exercises.
Winter Term: Xenophon's Anabasis and Verbs.
Spring Term: Herodotus or Homer's Iliad.
Prose Composition and Diagram Analysis.

Majors.

Fall Term: Homer's Odyssey or Xenophon's Memorabilia.
Winter Term: Plato's Apology and Crito, or Pratagoras.
Spring Term: Aristophane's Clouds, or Plutarch's Lives.
Prose Composition, Scanning and Sight Reading.

Specials.

Fall Term: Sophocles, Œdipus Tyrannus, Electra or Antigone.
Winter Term: Euripedes, Electra or Orestes.
Spring Term: Æschuylus, Agamemnon, Promotheus or Eumenides.
Special exercises and scanning.
New Testament Greek may be substituted for any one of these terms.

Electives.

Fall Term: Demosthenes, de Corona.
Winter Term: Thucydides, Histories.
Spring Term: Pindar, Odes.
Special Exercises.

II. Modern Greek.

Students who can pass an examination on the Minor Greek will be admitted to the Major Course.

A thorough preparatory course in Greek is provided for students requiring it, by the University.

All candidates for the degree of A. B. are required to take the two years' regular work in Latin and Greek; and to those expecting to teach, the Specials and Electives are earnestly recommended.

MATHEMATICS.

PROFESSOR STEWART.

Before being admitted to this course, students will be required to pass examinations in Arithmetic, (including the metric system of weights and measures), in Plane Geometry, and in University Algebra to Logarithms.

Too much emphasis cannot be placed upon a thorough preparation for a course in pure mathematics. The student should have clear conceptions of the meaning of all that he does, and be able to state and solve problems with clearness and accuracy. He should be able to apply the principles of geometry in the construction of diagrams, in the solution of numerous exercises, and the demonstration of simple theorems.

In all examinations much depends upon the clearness, accuracy and completeness of the answers given.

The course consists of one Minor, one Major, and one Special course. The Minor course is required of all students who are candidates for a degree. The Major Course, in addition to the Minor, for all who are candidates for scientific or engineering degrees.

I. MINOR COURSE.—Five hours per week throughout the year.

Fall Term: Wells' College Algebra, Logarithms, Determinants and Theory of Equations.

Winter Term: Wells' Solid Geometry and Exercises.

Spring Term: Wentworth's Plane and Spherical Trigonometry.

II. MAJOR COURSE.—Five hours per week throughout the year.

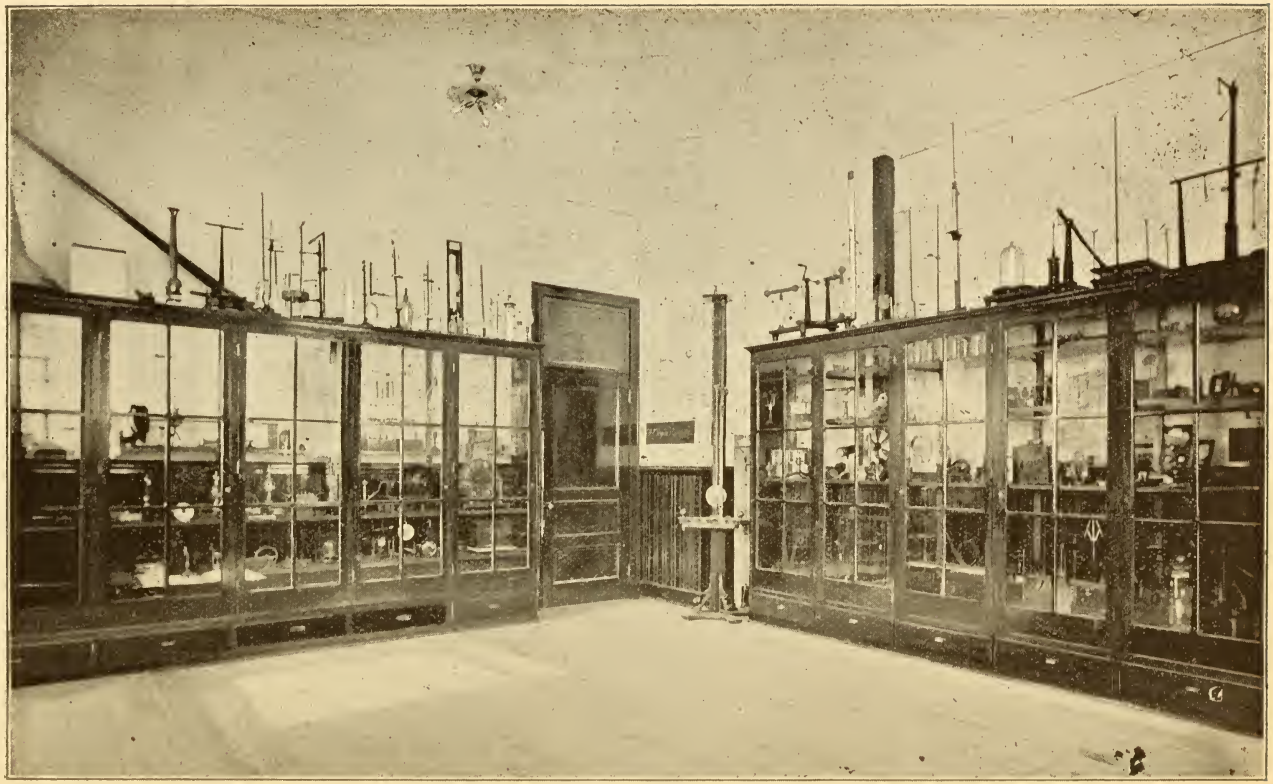
Fall Term: Analytic Geometry, Nichols.

Winter Term: Differential Calculus, Curve Tracing, Taylor.

III. SPECIAL COURSE.—Two hours per week throughout the year.

Astronomy: Descriptive and Mathematical.

Students must complete Course I before entering upon Course III.



Physical Laboratory.

CHEMISTRY AND PHYSICS.

Professor Whitehill.

Minor Courses.

1. General Physics.

Three hours per week throughout the year are given to this course. The leading principles of Mechanics are studied during the Fall term. Magnetism, electricity and sound are studied during the Winter term, and heat and light during the Spring term. To enter this course the student must have a knowledge of Arithmetic, Algebra and at least three books of Plane Geometry. Fully one-half of the time throughout the year is devoted to experimental work, and the student is taught not only the essential facts of the science, but also the value of the scientific method as a discipline.

2. General Chemistry.

Three hours per week throughout the year are given to this course. The subject is taught by the experimental and inductive method. The subjects presented are the laws of chemical combination, the source, preparation properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Allusion is constantly made to the applications of chemistry in medicine, pharmacy and arts, and suggestions are given in the line of turning chemical knowledge to practical account. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

A knowledge of the branches required for the entrance into the first year's course in Physics is also necessary for the successful completion of this course in Chemistry.

Major Courses.

1. ADVANCED PHYSICS.

This course includes two exercises per week throughout the year. The time for each exercise varies with the nature of the work to be performed. The course is open to students who have taken the first year's course in Physics in the University, or an equivalent course elsewhere, and who have sufficient mathematical knowledge for the investigation of subjects in higher Physics.

In connection with the theoretical work practical work is undertaken in dynamics, sound, heat and light, and the elements of Electrical Engineering receive attention.

2. ANALYTICAL CHEMISTRY.

Six hours per week throughout the year are given to this course. The students work in the laboratory under the guidance of the instructor.

Facilities are provided for systematic instruction in qualitative analysis and for general practice in experimental work. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different metals and acids are made in turn, and unknown compounds are from time to time given to test the progress of the student in his work. During the Spring term an elementary course in quantitative analysis is given, and special attention is directed to the more important medical preparations, and to the analysis of water, coal and coke.

Students who have completed the first year's course in Chemistry in the University are admitted to this class without examination. All other applicants are required to satisfy the professor of their adequate knowledge, or pass an examination on the matter contained in any elementary work on the subject named.

Special Courses.

1. QUANTITATIVE ANALYSIS.

An extended course in Quantitative Analysis is offered, which includes both the gravimetric and volumetric methods. In this course exercises are given in determining the composition of ores, minerals, clays, coal, coke, potable and mineral waters, and various technical compounds. Instruction is also given in gas analysis, in the assaying of gold, silver and lead ores, and in the analysis of iron and steel. Members of the class have access to the laboratory at such times as may be agreed upon, and in connection with the regular work are encouraged to undertake original research. Students who expect to teach Chemistry as well as those who expect to become professional chemists will find in this course unusual facilities for practical work.

2. Special courses in other subjects pertaining to this department will be offered in accordance with the facilities for instruction and the demand for the same.

One of the Chemical Laboratories.

Apparatus.

Students in the several classes have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Atwood's Machine, Pelton's water motor, 4 Trœmer balances, Jolly balance, Brush-dynamo, 2 Ruhmkorff coils, Holtz and plate electrical machines, with accessories, Leyden and galvanic batteries, electrical testing sets, resistance coils, ampere and volt metres, galvanometers, Perret electric motors, Geissler, Crookes and Plucker tubes, telegraphic instruments, telephone, microscope, 2 spectroscopes, polariscope, colorimeter, heliostat, 2 air pumps with accessories, siren, sonometer, manometric flame apparatus, radiometer, optical lantern, plane-convex and concave mirrors, graposcope, kaleidoscope, stereoscope, meteorological instruments, apparatus for electroplating and gas analysis, combustion furnaces, photographers' outfits, models, levers, planes, pulleys, pendulums, etc.

The method of instruction in this department is by text-books, lectures and experiments. In every course the theoretical work is supplemented by practical work in the laboratory.

The facilities for instruction in both Chemistry and Physics have been largely increased by the completion of the Scientific Building, which is one of the best arranged buildings of its kind in the country. The lecture rooms are well ventilated and are supplied with the necessary appliances for the illustration of the lectures, and the laboratories are amply equipped with materials and fine apparatus for general scientific work.

BIOLOGY.

PROFESSOR HARTIGAN.

Minor Courses.

1. FIELD BOTANY.

This class meets once a week throughout the year. The Fall and Winter terms are devoted to the study of the text, which is expanded by lectures from time to time, while the Spring term is given to practical work in the analysis of flowers. Examinations are held at the end of each term, and in addition to the practical work in the class room and field, each student is required to prepare an herbarium of one hundred species. The text is Wood's Botanist and Florist. In analysis, Wood, and the Systems of Gray and Kellerman.

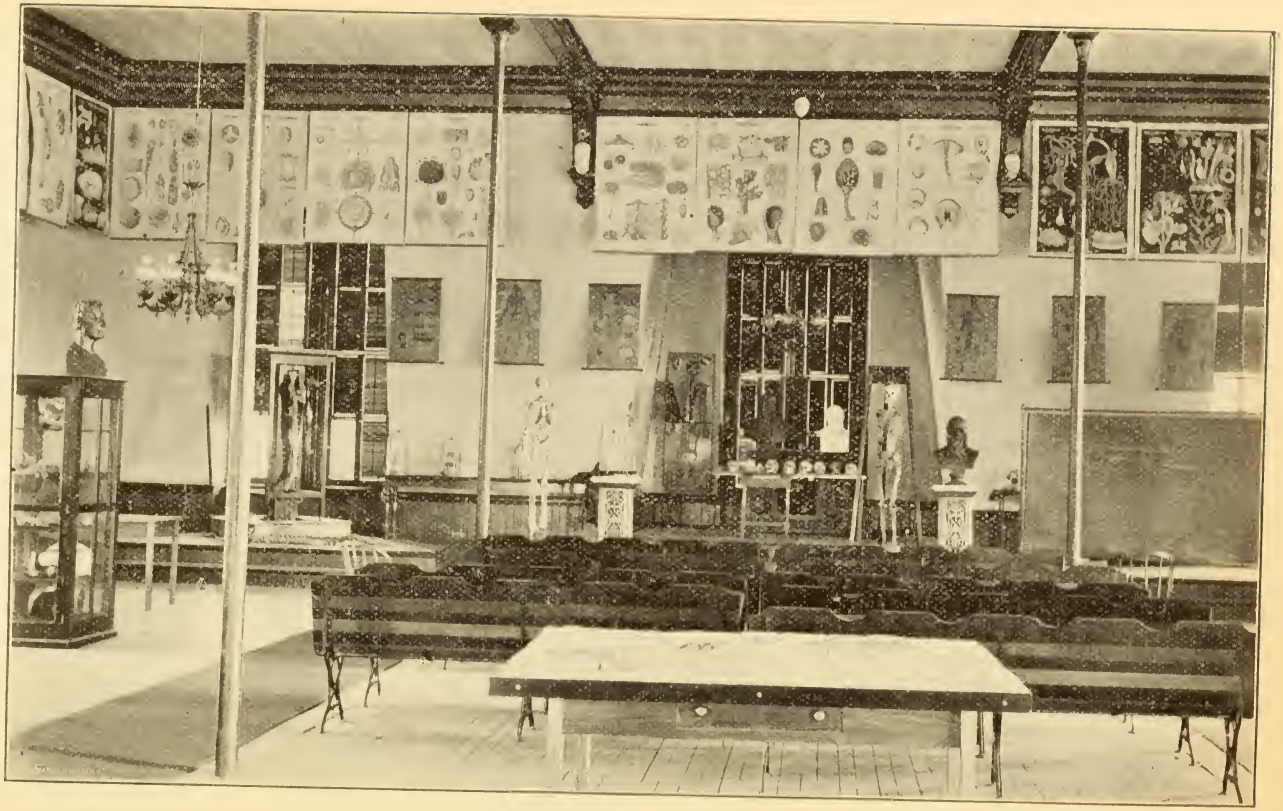
2. PHYSIOLOGY AND HYGIENE.

One hour a week throughout the year is given to this subject, (co-ordinated with Course 1.) The course is entirely by lectures, no special work being used as a text, though any standard work is recommended for collateral reading. Books recommended for reading are: Flint's Human Physiology, Yoe's Manual Kirke, Dalton. In Hygiene—Huxley and Youmans, Wilson, Parks.

3. ZOOLOGY.

Two hours a week throughout the year are given to this subject. The Fall term is given to the study of Comparative Zoology. This part of the course is mainly by lectures. The Winter and Spring terms are devoted to the study of Systematic Zoology, Embryology and Histology. Students are instructed in the use of the microscope, and are required to use it in their investigations each day in the class-room. Members of this class are required to skeletonize five vertebrate animals, as practical work.

The text is Orton's Zoology, with the works of Darwin, Hæckel, Spencer, Packard and Claus, for reference.



Biological Laboratory.

Major Courses.

1. Structural Botany.

One hour a week throughout the year is given to this subject. The Fall and Winter terms are given to the study of general plant Anatomy and Physiology; and the Winter term to the special consideration of these subjects, the student being instructed in the practical use of the microscope in the study of Plant Histology. Bessey's Structural Botany is the text used.

For reference, Gray, Sachs, Crookshank's Bacteriology, Bentley, Cooke.

2. Human Anatomy.

Five hours a week throughout the year are given to this subject. The course is entirely by lectures, and is designed as a special course in this branch for those desiring to prosecute the study of Medicine and Surgery. The skeleton or cadaver will furnish the proper text for each lecture, though models, manikins, specimens and charts will be used when necessary to elucidate any special subject.

Students in this course are required to dissect three parts of the human body and to be examined thereon. The dissecting room is open each evening from 7 till 10 o'clock, and all members of the class are required to be present. Keene's edition of Gray's Anatomy is the text used.

Note —Special certificates in Major courses 1 and 2 are accepted by leading Medical Schools of the country, as an equivalent for the same subjects required by them for the degree of M. D., and all students entering these courses with a view to obtaining such certificates, must pass an examination in preparatory Latin and second year's English, and, if not prepared on entrance to take such examinations, they will be required to pursue these studies during the year in connection with the above courses.

3. Microscopy.

Two hours a week are given to this course. This course is elective. Instruction is given in Microscopical Technique, Vegetable and Animal Histology and Bacteriology. The principles of Staining, Germ Culture, Methods of Analysis of air and water are studied as applied to practical Hygiene. The course is by lectures and practical laboratory work.

GEOLOGY AND MINERALOGY.

PROFESSOR BROWN.

These are classified in Courses. All classes continue throughout the year.

Minor Courses.

1. PHYSICAL GEOGRAPHY.

In the Spring term this subject will be taught principally by lectures upon the relation of Physical Geography to human history.

Tuesdays and Thursdays, 10:30, 2 hours.

2. GENERAL GEOLOGY.

This subject is open to all students who have attained proficiency in Chemistry and Botany. It is required of all candidates for the degree of A. B.

Text-book, LeConte's Elements of Geology.

Mondays, Wednesdays and Fridays, 10:30, 3 hours.

Major Courses.

1. MINERALOGY.

This class is open to all students. The work will be mostly practical, and will consist of minute examinations of hand specimens of the various minerals, and of blowpipe and acid tests of many of them.

Text-book, Dana's Manual of Mineralogy.

Tuesdays and Thursdays, 8:30, 2 hours.

2. ECONOMIC GEOLOGY.

It is necessary to have completed one year's work in General Geology before being admitted to this class.

The first part of this course will be devoted to the geology of mining and ag

Geological Room.

Geological Room.

riculture; the second part will consist of the examination of rocks and rock-making materials with special reference to the qualities of our various building stones. Examination by microscope of thin sections of various rocks will be a frequent class exercise.

Text-books, Tarr's Economic Geology of the United States and Merrill's Stones for Building and Decorations.

Mondays, Wednesdays and Fridays, 11:30, 3 hours.

Equipment in This School.

The equipment for purposes of illustrative teaching in this School is now considerable; although many things are yet needed.

For teaching Geography and Structural Geology, many maps and models are at hand.

For Historical Geology, we have now nearly complete, Ward's College Collection of paleontology, showing the advancement from the early forms of life to those of the present time.

For Mineralogy and Economic Geology, we have now well selected specimens of several hundred species of minerals and building stones.

Excursions.

Local excursions, on Saturdays especially, are made by the regular classes during the Fall and Spring terms, and much attention is given to stratigraphic and economic problems in Geology. Few States offer so many advantages to students in practical geology as does West Virginia.

The site of the University, located as it is in the heart of the great Appalachian coal field and close to a great oil and gas region, offers unequaled facilities for the study of many problems connected with this useful science.

HISTORY AND POLITICAL SCIENCE.

PROFESSOR REYNOLDS.

In this school courses are given in History, Comparative Politics, Science of Government, Development of the Government of the United States, Political Economy and Principles of Economics, and Practical questions, such as Socialism, Finance, etc., etc.

THE MINOR COURSE requires five hours per week throughout one year, and is arranged as follows:

Section 1. Mondays, Wednesdays and Fridays, 10:30.

Fall Term: Historical Introduction to Politics.

Winter Term: Comparative Politics; an examination of the forms of government of the leading nations of the world.

Spring Term: Development of the Government of the United States.

Section 2. Tuesdays and Thursdays, 10:30.

Fall Term: Principles of Political Economy.

Winter Term: Practical Applications of Principles of Economics.

Spring Term: Finance, with History and Principles of the American System.

THE MAJOR COURSE will be made up of more advanced studies in the subjects composing the Minor course, and in kindred subjects of a political, economic and social character. The selections of the Course, special topics and schedule hours will be announced at the beginning of the session.

Instruction in this school will be by maps, text-book assignments, recitations, collateral reading, lectures, notes and discussions.

METAPHYSICS.

Professor Reynolds.

This school provides for the following courses:

Psychology: physiological, comparative and historical.

Logic: deductive and inductive, and the principles of the science.

Ethics.

The Minor Course requires five hours per week throughout one session and is arranged as follows:

Section 1. Mondays, Wednesdays and Fridays, 8:30.

Fall Term: Elements of of Psychology and general introduction to the science.

Winter Term: Studies in Physiological and Comparative Psychology.

Spring Term: Elements of Logic, both inductive and deductive.

Section 2. Tuesdays and Thursdays, 8:30.

Fall Term: Elements of Ethics, including the moral faculty, ground of obligation, duties and their basis, and ethical culture.

Winter Term: The Development of Ethics, from the lowest grade of morals to the highest.

Spring Term: Ethics and the Science of Religion.

Instruction in this course is given by text-book assignments, recitations, lectures, charts and diagrams, notes and discussions.

The Major Course will be made up of advanced studies in the subjects composing the Minor Course, for those who wish to pursue the study of these subjects further; with additional studies in Metaphysics proper and the History of Philosophy. The sections of the Course, the special topics and the schedule hours will be announced at the beginning of the session.

Degrees.

The degrees of Bachelor of Arts and Bachelor of Science are conferred upon students who have finished the following courses, respectively:

Bachelor of Arts: Eight minor courses, including Mathematics, and six major courses, including both English and Ancient Languages. Or in lieu of any two of the majors, except English and Ancient Languages, special courses equivalent to two major courses.

Bachelor of Science: Eight minor courses, including English, and six major courses, including both Mathematics and Modern Languages. Or in lieu of any two majors, except Mathematics and Modern Languages, special courses equivalent to two major courses.

The Faculty may accept an equivalent for the above courses from candidates for degrees, provided they make application and present the required amount of work before the beginning of the senior year.

FACULTY OF THE WEST VIRGINIA AGRICULTURAL COLLEGE.

J. L. GOODKNIGHT, D. D., PRESIDENT.

JOHN A. MYERS, A. M., PH. D., DEAN,
Professor of Agricultural Chemistry.

P. B. REYNOLDS, D. D.,
Professor of Psychology and Political Economy.

L. C. CORBETT, B. S.,
Professor of Agriculture and Horticulture.

A. D. HOPKINS, PH. D.,
Professor of Entomology.

B. H. HITE, M. S.,
Professor of Organic Chemistry.

A. R. WHITEHILL, PH. D.,
Professor of General and Analytical Chemistry and Physics.

JAS. W. HARTIGAN, A. M., M. D., F. S. S., F. R. M. S.,
Professor of Biology and Bacteriology.

ROBT. A. ARMSTRONG, A. M.,
Professor of English.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages.

SAMUEL B. BROWN, A. M.,
Professor of Geology.

JOHN L. JOHNSTON, C. E.,
Professor of Civil Engineering.

JAMES S. STEWART, M. S.,
Professor of Mathematics.

WILLIAM P. WILLEY, A. M.,
Professor of Equity and Jurisprudence.

CAPT. C. C. HEWITT, 19TH INFANTRY, U. S. A.,
Professor of Military Science and Tactics.

THOMAS C. MILLER, A. M.,
Principal of Preparatory Department.

A. J. HARE, A. B.,
Assistant Professor in English and Mathematics.

W. E. RUMSEY, B. S. AGR.,
Assistant in Entomology and Botany.

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Assistant in Agriculture.

RUSSEL L. MORRIS, C. E.,
Assistant in Civil Engineering.

W. BERNARD CUTRIGHT, A. B.,
Assistant in Preparatory Department.

C. R JONES, C. E.,
Assistant in Mechanical Engineering.

DENNIS M. WILLIS,
Assistant in Preparatory Department.

WAITMAN BARBE, M. S.,
Field Agent of the University.

MRS. SADIE M. HOUSTON,
Experiment Station Librarian.

The Experiment Station.

THE WEST VIRGINIA AGRICULTURAL COLLEGE.

The West Virginia Agricultural College is organized as a department of the West Virginia University. Heretofore, the instruction in Agriculture has been given in what was known as the "Agricultural Course," but in the reorganization of the University, it is deemed advisable to enlarge the facilities in this department, and it will now be recognized as a college with a complete Faculty and course of study intended to fully equip young men for the highest practical and scientific agricultural pursuits. It contemplates a liberal and scientific training along agricultural lines, besides giving extensive and complete courses of instruction upon strictly agricultural subjects; it affords facilities for the mastery of agricultural chemistry, horticulture, dairying and animal husbandry and provides extensive and accurate training in chemistry, physics, bacteriology, entomology, botany, geology, mathematics, political economy, English and German, and military science. A student who takes the agricultural course will have scientific attainments and mental training equal to those acquired by students in any of the scientific courses of the University.

The requirements for entering the Agricultural College are the same as for entering the several engineering schools of the University. and students who are not prepared to enter the course upon this grade, will be required to take the necessary preliminary studies either in the preparatory department of the University or elsewhere, and pass an examination upon them or satisfy the several professors of their proficiency before entering the Agricultural College as regular students.

In order to stamp upon the student's mind a taste for agricultural pursuits, instruction in agriculture will begin in the Freshman year, and extend throughout the whole course of four years. A study of the work of the several professors will indicate in detail the requirements necessary to complete the course and secure the degree of B. S. Agr.

Students in the Agricultural College will recite to the regular professors of the University in those classes which are studying branches that are required

in the agricultural course. Where technical or special instruction is required, additional professors are provided, so that the student may secure the broadest agricultural training under highly favorable conditions.

The splendidly equipped mechanical department, the resources of the engineering and scientific schools of the University, together with their ample laboratories and splendid outfits of scientific apparatus, and the libraries of the Agricultural Experiment Station and University are placed at the command of the student. The farm of the Agricultural Experiment Station, together with its gardens, experimental plants, laboratories and collections will be available for students desiring to acquaint themselves with the practical and scientific methods of conducting agricultural pursuits, and to investigate scientific questions relating to the progress and development of agriculture.

The farm recently bought by the University is an average West Virginia farm, equipped with barns, stables and other buildings, and presents a variety of soils and conditions frequently existing upon many of the farms of the State. Upon this farm are to be kept different varieties of farm animals, the most approved agricultural implements, and facilities are provided for studying the most economic methods of handling live stock and their products.

As far as the resources of the University will justify, and the practical demands of the farm may require, students in the agricultural and horticultural courses may find a limited amount of work, for which they will be paid, when it is of a character that proves remunerative to the institution. No payment, however, will be given to them for practice in the application of particular principles, or in illustrating the operations of agricultural implements, etc.

It is believed that a student completing the course in agriculture at the West Virginia Agricultural College, will have secured a training bearing directly upon agriculture and at the same time have acquired a breadth of culture, that will enable him to successfully compete in the struggle of life with the graduates of any other agricultural college in the country. The students who graduate from this course are expected to be thoroughly trained and enthusiastic followers of their chosen profession. In the past, there has never been in this State, the demand for an agricultural education that prevails in some of the other States of the country, where agriculture is more universally engaged in, and is the leading industry; but the Board of Regents, wishing always to keep the University fully abreast of the times, has thought best to organize this institution in the hope that young men may be found in the State, who desire to take such a course of instruction as will justify the Board in organizing and maintaining this extensive plant strictly and solely for the benefit of the agricultural classes of the State.

The course of instruction is as follows:

English.

Prof. Robt. A. Armstrong.

Freshman class will begin with minor English, section 1, as laid down in the course of instruction in the University, and will continue throughout the Freshman year, on Monday, Wednesday and Friday, 8:30. In the Sophomore year, students in the Agricultural Course will take minor English, section 2, as laid down in the University catalogue, two hours per week, throughout the year, on Tuesday and Thursday, 10:30. The third or Junior year, students will take major English, section 2, throughout the year, on Tuesday and Thursday, two hours per week. Students are recommended to take two English studies, possible, in the Senior year, as an elective.

General Chemistry and Physics.

Prof. A. R. Whitehill.

The course of instruction in this branch will be the same as laid down in the University, (see Chemistry and Physics) and besides the lectures, will include laboratory practice Friday afternoon and Saturday forenoon, throughout the year. In the Sophomore year students will be expected to take laboratory practice in the chemical and physical laboratories on Monday and Wednesday. In the course in the Chemical laboratory students will secure ample training in the methods of chemical analysis, and acquire sufficient skill to be able to interpret the results of chemical analysis, and also to make the more elementary quantitative determinations. In the physical laboratory they will be expected to acquire a knowledge of the application of principles of physics and elementary mechanics.

Chemistry and Physics at 9:30 a. m., five days in the week. Laboratory practice on Friday at 1:30 p. m., and on Saturday at 8:30 a. m., in the Freshman year; at 1:30 p. m., on Monday and Wednesday of the Sophomore year.

Mathematics.

Prof. Jas. S. Stewart.

In the Freshman year the students will take what is laid down in the minor course 1, as laid down in the University catalogue; five hours throughout the Freshman year (see Mathematics.) In the Sophomore year, under Prof. Johnston, students will be required to take the course in surveying on Tuesdays and Thursdays, two hours per week (see 16, Engineering and Professional studies.) In the Freshman year students will take free-hand drawing throughout the year at two periods, Tuesday and Thursday.

Geology.

PROF. S. B. BROWN.

Students will take general geology, 2nd; Monday, Wednesday and Friday, 10:30, three hours per week in the Sophomore year, and in the Junior year at 11:30 they will take economic geology three hours per week throughout the year, (see Geology and Mineralogy, University catalogue.)

German.

PROF. J. I. HARVEY.

Instruction in the German language will begin in the Junior year and extend throughout the year, five hours per week, (see minor German, University catalogue.) Senior year three hours per week, in which special attention will be given to acquiring a knowledge of scientific German, and students will be expected to acquire sufficient knowledge of the language to be able to read scientific German at sight. If the student prefers he may offer French instead of German, but in either case he will be expected to have sufficient knowledge of the language to be able to readily read scientific literature published in it.

Natural History.

PROF. J. W. HARTIGAN.

Zoology two hours per week same as in University. (See Biology, University catalogue.) Instruction in Bacteriology and laboratory practice in use of Microscope will also be given. The University is provided with an excellent equipment for this purpose.

Commercial Law.

PROF. W. P. WILLEY.

The course in Commercial Law is the same as required in the Junior Course of the Law Department, which see. It is intended to acquaint the student with the principles of the law relating to contracts, commercial paper and business transactions of various kinds.

History and Political Science.

PROF. P. B. REYNOLDS.

The course in these branches is the same as given in the University and embraces five hours recitations or lectures per week throughout the Senior year. (See University Catalogue.)

THE ELECTIVE STUDIES in the Senior year, three hours per week, will be arranged upon consultation with the Dean of the Agricultural College.

One of the Station Laboratories.

Agricultural Chemistry.

PROF. JOHN A. MYERS.

The course in agricultural chemistry will cover the following subjects:

Lectures and recitations as indicated in the schedule of hours. It will alternate with the course in organic chemistry.

Chemistry of Plants.

The production of organic substance; effect of light, heat and moisture; the changes of organic substances during plant growth, from one to another; plant breathing and feeding; nitrogenous matter of plants; carbohydrates of plants; the most valuable parts of plants.

The ash constituents of plants; water and sand culture; the chemical composition of ashes; accidental and necessary elements of plant growth found in them; various quantities of particular kinds of ash ingredients required by different plants.

Experimental methods for determining what plants require for proper growth.

The soil, its origin, physical properties and chemical ingredients; the effects of plant growth upon the composition and physical character of the soil; effects of moisture, heat, freezing, draining and cultivation upon the character of the soil; humous and organic matter; the wastage of the resources of the soil.

Fertilizers.

Natural and artificial fertilizers; stable manure, its composition and application; waste and organic products of the farm; composting; green manures, their growth and importance; mineral manures,—salt, lime, gypsum, marl, potash salts, phosphate rock.

Commercial Fertilizers—source of supply, composition and manufacture economic fertilization.

Effects of phosphoric acid, nitrogen and potash upon plant growth; special fertilizers.

Books of Reference, Storr's Agriculture; Johnson's "How Plants Feed;" Johnson's "How Plants Grow."

Organic Chemistry.

PROF. B. H. HITE.

Two lectures a week throughout the year.

This course presupposes a knowledge of general elementary chemistry, and of qualitative and quantitative analysis.

Instruction in the theoretical basis of the science will be made as thorough

as possible, and the many applications to agriculture and medicine will receive special attention.

A laboratory for organic preparation has not yet been provided; but the lectures will be fully illustrated by specimens and experiments, and the student will be given an opportunity to prepare some of the more important compounds. For example, marsh gas, chloroform, alcohol, ether, ascetic acid, soaps, fruit sugar, urea, salicylic acid, rosaniline.

The instruction will be given almost entirely by lectures.

Reference Book, Remsen's Organic Chemistry.

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Animal Nutrition.

——— ————, ASSISTANT PROFESSOR.

Principles of scientific and economic feeding: protein matter, ash, water, carbohydrates, fat: composition of animal bodies.

Digestion, nutrition, excretion; feeding for special purposes.

Pasture, grain, hay, silage, by-products; feeding for special purposes.

Reference Books, Armsby's Manual of Cattle Feeding; Stewart's Feeding Animals.

Dairying.

——— ————, ASSISTANT PROFESSOR.

Dairy farm and buildings; feed stuffs, rations; rearing calves; handling and care of cows; dairy breeds of cattle.

Milk, composition and qualities; bacteria of milk; fermentation; sterilization; Pasteurization of milk; condensed milk.

Creameries, their organization and management; cream, separation, preservation and fermentation; value and utilization of skim milk.

Churning,—butter, production and preservation of.

Cheese,—varieties, methods of making and preserving.

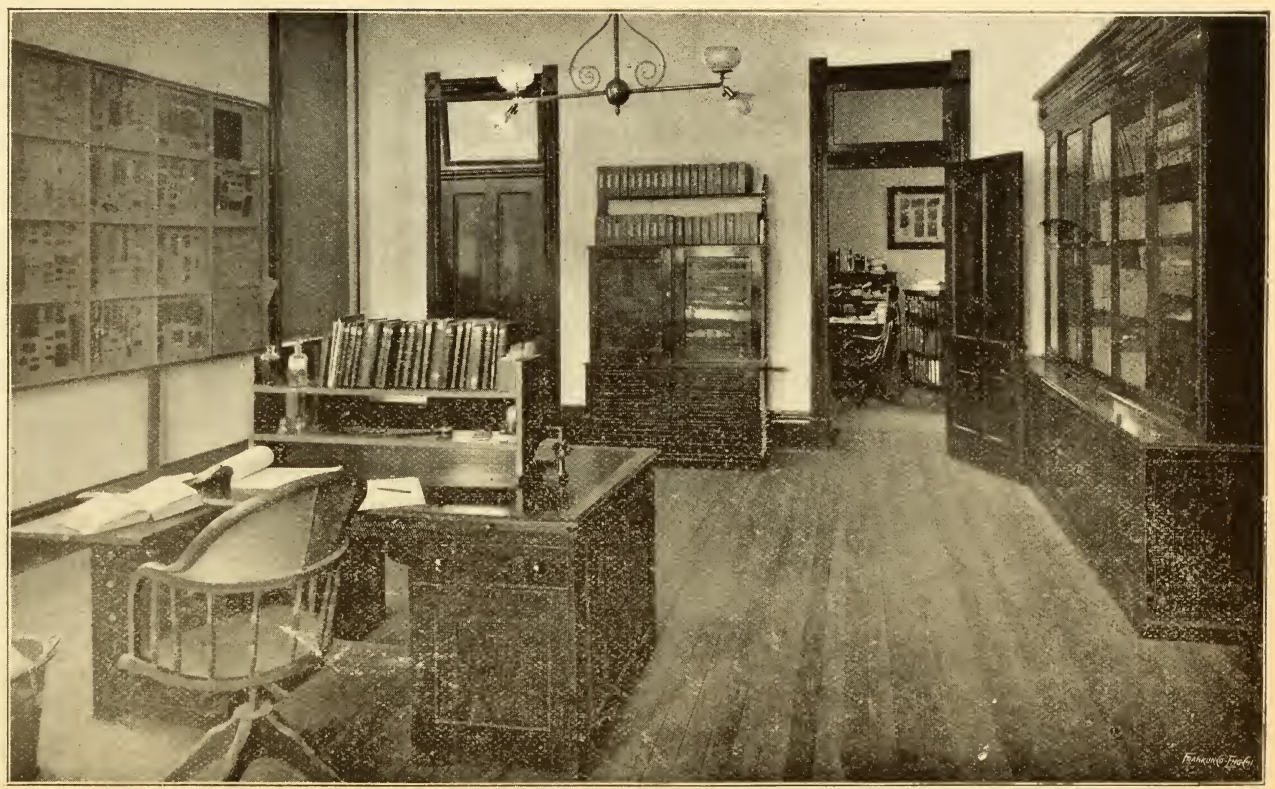
Bacteria of cheese.

Reference Books, Grotenfelt-Woll, Arnold and Oliver.

Economic Entomology and Economic Botany.

PROFESSOR A.D. HOPKINS AND ASSISTANT PROFESSOR W.E. RUMSEY.

The object of these economic courses is to stimulate an interest in the study of insects and plants, and give instruction in entomological and botanical knowledge that is applicable to the needs of the students who will follow, or become interested, in any branch of agricultural or horticultural pursuits; to teach the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student how to observe and investigate the many simple, as well as complicated problems that are ever presenting themselves to the owner of a farm, vegetable, fruit or flower garden, a lawn or a forest, and how he may utilize this knowledge for the advancement of private and public interests.

The fall term will open with lectures on the rudiments of economic entomology and botany, followed by instruction in the practical features of these sciences that will prepare the student to take, at the beginning of the winter term, instruction in some of the more important practical features of systematic studies of insects and plants, while the spring term will be devoted, mainly, to instruction in the practical application of entomological and botanical knowledge.

Facilities.

The entomological and botanical laboratories of the Agricultural Experiment Station, with their full equipment of collections and apparatus, will be utilized in giving instruction in these courses.

The equipment of the entomological department consists of a collection of over 20,000 specimens and over 7,000 separate notes on original observation taken in West Virginia, by the Entomologist. The apparatus for collecting, breeding, mounting, preserving and studying specimens is complete. The microscopic outfit is sufficiently perfect for carrying on any class of study in this line. The photographic department is thoroughly equipped for the requirements of entomological and other work.

The collections and equipments of the botanical department offer superior facilities for the study of economic botany, and the practical features of systematic botany in its relation to agricultural pursuits, containing as it does a large series of West Virginia plants, and a special collection of economic plants, weeds and diseased plants; also an excellent outfit for the study of plant diseases.

Entomology.

Fall Term.—Three exercises per week, Mondays, Fridays and Saturdays; lectures, field and laboratory work.

Mondays and Fridays, 9:30. Lectures illustrated by lantern, charts, models, drawings and specimens, on elementary entomology, and the practical features of the science.

Saturdays, two hours or more, at the pleasure of the student, between 8 and 12 o'clock; in the field or entomological laboratory at the Experiment Station. The field work in this term will be devoted to observing and collecting different kinds of insects, with instructions in methods of studying living insects and collecting specimens. The laboratory work will consist of the study of collected material, with instruction in the methods of mounting and preserving specimens.

Lectures and original observations and instruction in the field will be the leading features of this course.

Winter Term.—Two exercises per week, *Wednesdays* and *Saturdays;* lectures, recitations and laboratory work.

Wednesdays, 9:30. Lectures and recitations on the practical features of systematic entomology.

Saturdays,—Two hours or more, at the pleasure of the student, between 8 and 12 o'clock: in the entomological laboratory of the Experiment Station. The laboratory work of this term will be devoted to the study of insects, their anatomy and classification into orders and families. Specimens of insect work will also be studied to determine the character of the injury caused by different species.

Spring Term.—Two exercises per week—*Wednesdays* and *Saturdays;* lectures, recitations, field and laboratory work.

Wednesdays, 9:30. Lectures upon the practical application of entomological knowledge.

Saturdays.—Two hours or more, at the pleasure of the student, between 8 and 12 o clock, in the field or entomological laboratory. The field work will be made a special feature of this course in studying the different kinds and stages of insects, their habits, the character of their work, the determination of the prime cause of troubles due to insect attack by the character of the injury, the collecting of specimens and living material to study in the insectary or laboratory. Each student will be encouraged and assisted in conducting some original studies on the habits and life histories of insects, experiments with remedies, or such other lines of original investigation as may be selected by the student.

Text-book, Comstock's *Manual for the Study of Insects.*

Economic Botany.

Fall Term.—Two exercises per week; *Wednesdays* and *Saturdays*; recitations, lectures, field and laboratory work.

Wednesdays, 9:30, lectures or recitations; *Saturdays,* field and laboratory work by appointment.

The elements of economic botany; the dissemination of weed seeds, their vitality, germination and growth.

Winter Term.—Three exercises per week—*Mondays, Fridays* and *Saturdays*; recitations, lectures and laboratory work.

Mondays, Fridays, 9:30, lectures and recitations; *Saturdays,* laboratory work by appointment.

Practical features of systematic botany in its relation to agricultural pursuits. An outline study of grasses and other forage plants, together with an examination of buds of fruiting trees and shrubs in their winter condition.

Spring Term.—Three exercises per week, *Mondays, Fridays* and *Saturdays* recitations, lectures, field and laboratory work.

Mondays and *Fridays,* 9:30, lectures and recitations; *Saturdays,* field and laboratory work by appointment.

Diseases of plants and the practical application of economic botany. The paramount features in this term's work will be the study of those fungus diseases that are of especial importance to the agriculturist, horticulturist and pomologist.

Reference Books for the Course in Economic Botany.

Seedlings.—Sir John Lubbock.
Winter Condition of Buds.—William Trealese.
Field and Garden Botany.—Asa Gray.
Agr., Grass and Forage Plants.—Dr. George Vasey.
Grasses of North America for Farmers and Students.—W. J. Bell.
Fungi and Fungicides.—Clarence M. Weed.
Publications of the U. S. Department of Agr., Division of Vegetable Pathology, together with current bulletins on the subject.

Agriculture.

....., *Assistant Professor.*

Instruction in theory and practice of Agriculture is begun in the Freshman year. The work then taken up consists of a study of the origin, cultivation and drainage of soils, together with a consideration of the special treatment of the staple farm crops.

Advanced Agriculture.

PROFESSORS MYERS AND CORBETT.

This feature of the course is designed to bring the student closely in touch with the practical problems of the farm. It is so arranged as to allow some latitude for special or preferred research along any of the following lines:
Special farm crops; stock breeding; dairying or poultry raising.

Station Methods.

PROFESSORS MYERS AND CORBETT.

This work is required in order that students may be better equipped to read and interpret Station literature; to enable them to systematically and scientifically pursue original investigations for themselves. By this practical experience they become better prepared to carry out the work of the farm and better able to meet its problems. The subjects of farm accounts and methods of making observations are important factors in this work.

Horticulture.

PROFESSOR CORBETT.

As a preparation for the work in horticulture the student is required to have had the elements of botany, Gray's lessons or their equivalent. The work in this department is taken up during the Fall term, and extends through the Sophomore year, the class meeting three times a week. The work of the first term consists of lectures and recitations on the origin, propagation, cultivation, insect enemies and fungus diseases of garden vegetables, together with practice in the planting and cultivation of these vegetables in the garden.

The work of the second term includes lectures upon all classes of fruits; their propagation, culture and pruning treatment to prevent injuries from insects and diseases. The lectures are enforced by actual practice in budding, pruning and planting trees, together with practical work in the preparation and application of insecticides and fungicides in their season.

The third term's work is a continuation of that of the second, together with lectures on the laying out of home grounds and the construction and management of greenhouses.

Advanced Horticulture.

PROFESSOR CORBETT.

This course is designed to meet the requirements of those who wish to prepare themselves for florists, nurserymen or practical fruit growers, as well as those who expect to teach. A study of the methods of plant breeding, evolution and heredity as applied to cultivated plants, are its chief features. This course is open only to those who have completed the required work of the Sophomore year.

Forestry.

PROFESSOR CORBETT.

Two hours per week during the Senior year are devoted to the consideration of the forestry problems presented in the United States.

The importance of groves and shelter belts for the protection of growing crops, the necessity for the maintenance of a forest cover to insure adequate and lasting water supplies and for the maintenance of equable climate, as well as the preservation of a future timber supply, are questions receiving consideration in this course.

Reference Books Upon Agriculture and Horticulture.

During the Freshman year the lectures and recitations of the course in Agriculture will be based on The Soil, by King; Land Drainage, French, and Current Bulletins for approved methods of culture for the cereal grains.

Chemical Laboratory of the Station.

During the Sophomore year the work in Horticulture will be based on the Vegetable Garden, by Vilmorin; How to Make the Garden Pay, by T. Greiner; The American Fruit Culturist, by J. P. Thomas; Barry's Fruit Garden and Fuller's Small Fruit Culturist; Bushberg Catalogue and Grape Manual; and Grape Training, by Bailey.

Advanced work in Horticulture wi l be based on Plant Breeding, by Bailey; Origin of Cultivated Plants, by De Caudole; and on Variation of Plants, by Darwin and Crozier.

The Forestry of the Senior year will be taught by lectures based on Fuller's, Hough's, Slick's, Nesbitt's and Houston's works on the subject.

Live-stock and Poultry Industries.

The instruction in the Live-stock and Poultry industries will be largely of a practical character and will be given in the afternoons of Mondays and Wednesdays throughout the Junior year. A competent instructor is to be provided.

Theses.

A thesis upon some subject relating to some agricultural or closely allied branch of study will be required of each student who graduates. This must be upon some subject selected by the faculty of the Agricultural College and will involve original investigation of a character intended to show the full abilities of the graduates.

The students will be required to work a portion of every Saturday in the aboratories or upon the farm or garden during the entire course.

Students are advised to adopt the course of study and pursue it closely and systematically. Experience shows that those who wish to scatter their studies throughout the entire University Course usually fail to graduate and generally encounter difficulties which might readily be avoided by taking the course in the order in which it is intended to be studied.

Degree.

The degree of Bachelor of Science in Agriculture, B. S. Agr., will be conferred upon the students who complete the course of study as laid down in the schedule.

SCHEDULE OF RECITATIONS IN AGRICULTURAL COLLEGE.

FIRST YEAR.

HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Min. Eng. 1st Sec.	Agriculture.	Min. Eng. 1st Sec.	Agriculture	Min. Eng. 1st Sec.	Chem. and Ph. Lab.
9:30	Chem. and Phy. (1)	Chem. and Phy. (1)	Chem. and Phy. (1)	Chem. and Phy. (1)	Chem. and Phy. (1)	
10:30	Math. (1)	Math. (1)	Math. (1)	Math. (1)	Math. (1)	
11:30						
1:30		Fr Hd. Dg.		Fr Hd. Dg.	Ch Ph. Lab. (Lit. Soc.)	
	Military.	Military.	Military.			

SECOND YEAR.

HOUR	MONDAY.	TUESDAY	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Horticulture.		Horticulture.		Horticulture.	Zoological Lab.
9:30	Ent. and Botany.	Surveying.	Ent. and Botany.	Surveying.	Ent. and Bot.	
10:30	Geology.	Min. Eng. 2nd Sec.	Geology.	Mining. Eng. 2nd Sec.	Geology.	
11:30	Agr. Chem.	Agr. Chem.	Organ. Chem.	Agr Chem.	Organ. Chem.	
1:30	Ch Lab. and Agr. Ph.	Prac. Hort.	Ch Lab. and Agr. Ph.	Practical Hort.	Zoological Lab.	
	Military.	Military	Military.			

THIRD YEAR.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Dairying.	Maj. English 2nd Sec.	Dairying.	Maj. Eng. 2nd Sec.	Dairying.	Farm and Garden.
9:30	German.	German.	German.	German.	German.	
10:30						
11:30	{ Economic Geology. { Natural History.	Nat. History.	{ Economic Geology. { Natural History.	Nat. Hist.	{ Economic Geology. { Natural History.	
1:30	Live Stock & Poultry	Nat. His. Lab.	Live Stock & Poultry	Nat Hist. Lab.	{ Farm & Garden (Lit Soc.)	
	Military.	Military.	Military.			

SCHEDULE OF RECITATIONS IN AGRICULTURAL COLLEGE.—Continued.

FOURTH YEAR.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Scientific German.	Forestry.	Scientific German.	Forestry.	Scientific German.	
9:30	Adv. Agr.	Adv. Agr.	Com'r Law.	Com'r Law.	Adv. Agr.	
10:30	Hist. and Sc. Gov.	Polit. Econ.	Hist. and Sc. Gov.	Political Econ.	Hist. and Sc. Gov.	
11:30	Elective.	Elective.	Adv. Hort.	Adv. Hort.	Elective.	
1:30	Station Methods.		Station Methods.		Station Methods.	Thesis upon Original Work.
	Military.	Military.	Military.			

COLLEGE OF ENGINEERING AND THE MECHANIC ARTS.

PROFESSOR WILLIAM S. ALDRICH, Dean.

Faculty.

J. L. Goodknight, D. D., President.
Wm. S. Aldrich, M. E., Professor of Mechanical Engineering.
John L. Johnston, C. E., Professor of Civil and Mining Engineering.
J. L. Johnston, Professor of Applied Mathematics and Drawing.
Clement R. Jones, B. S. C. E., Assistant in Mechanical Engineering.
Russell L. Morris, B. S. C. E., Assistant in Civil and Mining Engineering.

Other Professors,

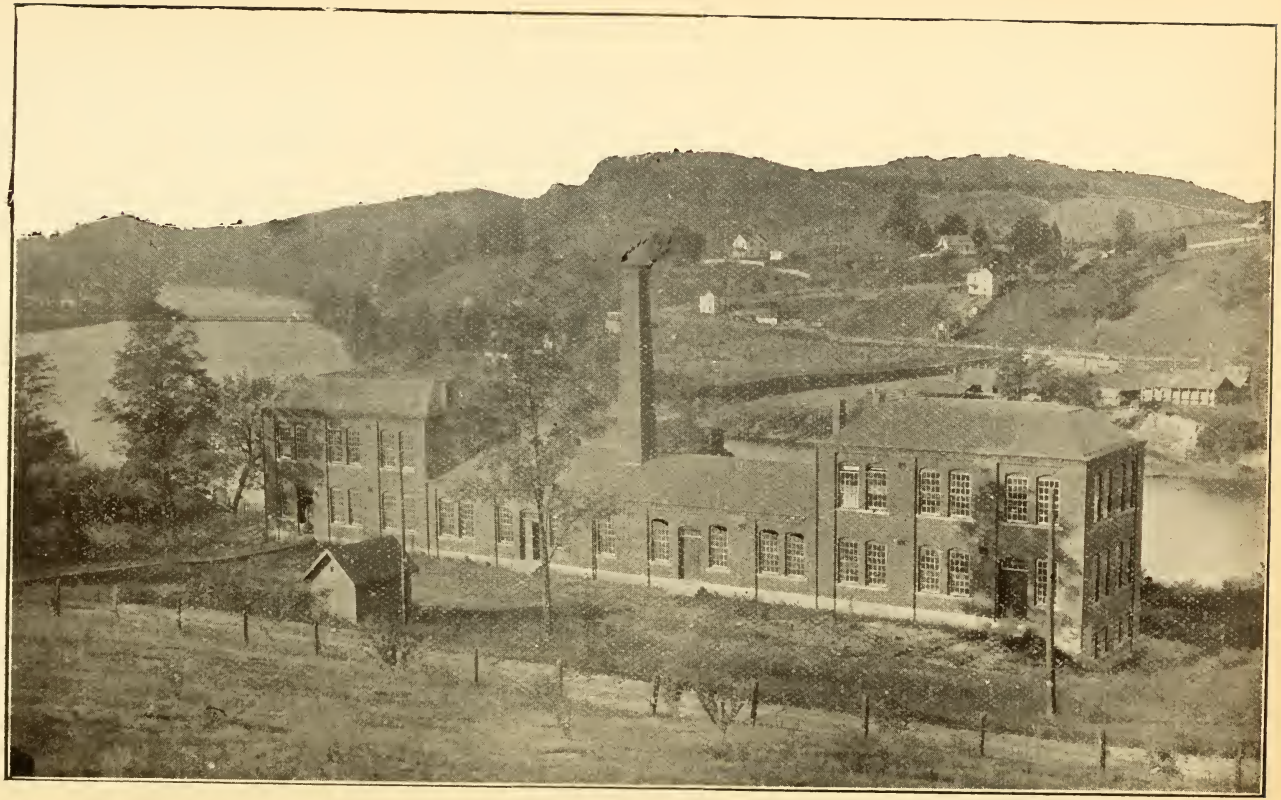
GIVING INSTRUCTION IN THIS COLLEGE.

John I. Harvey, A. M., Ph. D., Professor of Modern Languages.
Alex. R. Whitehill, Ph. D., Professor of Chemistry and Physics.
Samuel B. Brown, A. M., Professor of Geology.
Robert A. Armstrong, A. M., Professor of English.
James S. Stewart, M. S., Professor of Mathematics.

The control of this College is vested in the Faculty consisting of the President, ex-officio member, the Dean and the Professors in charge of the two schools, and Assistant Professors.

All students in this College are under the control of this Faculty, so far as their work is in this College.

The requirements for admission and graduation and the arrangement of the courses of instruction, and such other work as pertains to this College, are provided for by this Faculty, in conjunction with the University Faculty.



Mechanic Arts Building.

All final questions of discipline are referred to the University Faculty.

The degrees given upon satisfactory completion of the regular four-years' course of instruction, are, respectively: Bachelor of Science in Civil Engineering and Bachelor of Science in Mechanical Engineering. If students take elective or optional studies, a certificate to that effect is attached to the diploma from that school in which such elective course is given.

DEPARTMENTS of School of Civil and Mining Engineering:

1—Civil Engineering,
2—Structural Engineering,
3—Railroad Engineering,
4—Mining and Metallurgy,
5—Drawing and Designing,
6—Field Practice and Surveying.

DEPARTMENTS of School of Mechanical Engineering and the Mechanic Arts:

1—Mechanical Engineering,
2—Electrical Engineering,
3—Experimental Engineering.
4—Drawing and Machine Design.
5—Mechanic Arts.

COURSES OF INSTRUCTION.

ENGINEERING SCHOOLS.

Requirements for Admission to Engineering Courses.

ENGLISH.

English Grammar, Analysis, Composition and Rhetoric.

The essentials of English Grammar will be required; an ability to analyze English sentences correctly; a sufficient knowledge of composition to enable the candidate to write with ease and precision a business letter or a composition on an assigned subject, correctly applying the rules of orthography, of the use of capitals, of punctuation, etc., and a knowledge of Rhetoric such as is contained in Genung's Outlines of Rhetoric.

ARITHMETIC.

Completed; Ray's, Greenleaf's or equivalent.

ALGEBRA.

Elementary Algebra; Ray's, Milne's or equivalent, completed. Higher Algebra; Wells' University Algebra, or Ray's Higher Algebra to Theory of Equations.

GEOMETRY.

Plane Geometry, completed; Wells' or Brook's Geometry or equivalent.

HISTORY.

History of the United States, Fiske or Montgomery.

BOOKKEEPING.

A knowledge of elementary bookkeeping, penmanship and business forms.

ELEMENTARY SCIENCE.

Physiology and Hygiene, Hartigan, Steele or Cutter, equivalent of High School Course, and Field Botany, Wood's text or equivalent; or an equivalent in Natural Philosophy may be substituted, Gage's Introduction to Physical Science, Avery, Steele, or its equivalent.

PHYSICAL GEOGRAPHY.

As much as is usually given in High and Normal school courses; Houston, Mitchell, or equivalent.

INDUSTRIAL DRAWING.

Elementary Free Hand, and simple instrumental Drawing, equivalent to about one hundred hours of instruction.

MECHANIC ARTS.

Wood-working at the bench and wood-turning; iron and steel forging, clipping, filing and fitting iron work at the bench.

All students prepared to enter the Freshman year of Engineering can arrange to take MECHANIC ARTS and INDUSTRIAL DRAWING, during that year.

In general, all candidates for admission to the Engineering Courses must have satisfactorily completed the Scientific Preparatory Course of the University, or its equivalent. Below is given the schedule of weekly recitations for this course:

SCIENTIFIC PREPARATORY COURSE.

Hour.	Junior Year.	Time.	Senior Year.	Time.
8:30	Mathematics,	5 hrs.	Mathematics,	5 hrs.
9:30	English,	5 hrs.	English,	5 hrs.
10:30	U. S. History,	3 hrs.	Elementary Science,	3 hrs.
	Elementary Bookkeeping and Penmanship,	2 hrs.	1:30 P. M., Friday, Industrial Drawing,	
			8:30 A. M., Saturday, Mechanic Arts, Course 1.	

The studies of the University should not be anticipated. A thorough and working knowledge of the elements should be acquired. In this way, academic and technical studies may be pursued to better advantage later on during the regular course.

SPECIAL COURSES.

No student can be entered as a candidate for a degree in Civil or Mechanical Engineering after the beginning of the fourth year, though deserving young men who have not the time or are otherwise unable to take the full course, will be allowed to take a special or partial course, consisting of such studies as they are prepared to take up, provided that such partial course shall have been submitted to the Faculty and approved by them.

COURSES OF INSTRUCTION IN ENGINEERING.

(*Civil, Mining, Mechanical and Electrical Engineering.*)

Drawing and Designing.

FIRST YEAR.

(1.) Freehand Drawing; throughout the year, twice a week.

SECOND YEAR.

(2.) Instrumental and Mechanical Drawing; throughout the year, two hours per week.

THIRD YEAR.

(3.) Mechanical Drawing; throughout the year, twice a week.
(4.) Machine Drawing and Design; throughout the year, twice a week

Course I.—Mechanical Engineering.

FOURTH YEAR.

(5.) Fall and Winter Terms; Detail working plans, engineering construction and machinery designing, twice a week.
(6.) Fall and Winter Terms; Machine Drawing and Designing, twice a week.

Course II.—Mechanical Engineering.

(7.) Spring Term: Thesis Drawings and Designs.

Applied Mathematics.

SECOND YEAR.

(8.) Mechanics of Engineering; throughout the year, one hour per week.
(9.) Descriptive Geometry; throughout the year, three hours per week.

THIRD YEAR.

(10.) Mechanics of Engineering; throughout the year, five hours per week.

FOURTH YEAR.

(11.) Fall Term; Roofs and Bridges, five hours per week.
(12.) Fall Term; Electrodynamics, five hours per week.
(13.) Fall Term; Thermodynamics, five hours per week.
(14.) Fall and Winter Terms; Stereotomy, three hours per week.
(15.) Winter Term: Hydraulics, five hours per week.

Engineering Professional Studies.

SECOND YEAR.

(16.) Land and Mine Surveying; throughout the year, two hours per week.
(17.) Mechanical Technology; throughout the year, two hours per week.

THIRD YEAR.

(18.) Fall Term; Railroad Location, three hours per week.
(19.) Mechanism and Machinery; throughout the year, two hours per week.
(20.) Winter and Spring Terms: Engineering Construction; three hours per week.
(21.) Journal Meeting; throughout the year, one hour per week.

FOURTH YEAR.

(22.) Fall and Winter Terms; Mining, two hours per week.
(23.) Winter Term; Power and Power Plants, three hours per week.
(24.) Fall Term; Civil Engineering; five hours per week.
(24.) Winter Term; Civil Engineering; three hours per week.
(25.) Winter Term; Machinery, two hours per week.
(26.) Spring Term; Railroad Economy, three hours per week.
(27.) Economics of Engineering, three hours per week.
(28.) Metallurgy, three hours per week.
(29.) Electric Light, three hours per week.
(30.) Electric Power, three hours per week.
(31.) Specifications and Contracts, two hours per week.
(32.) Throughout the year; Designing Machinery, two hours per week.
(33.) Journal Meeting, one hour per week.

Original and Thesis Work, as assigned.

Field Practice, Laboratory and Shop Work.

SECOND YEAR.

(34.) Throughout the year; Mechanic Arts, once a week.
(Course I.—Mechanic Arts.)
(35.) Mechanic Arts, twice a week.
(Course II.—Mechanic Arts.)
(36.) Field Practice in Land and Mine Surveying once a week.

THIRD YEAR.

(37) Throughout the year: Railroad Location and Topographical Surveying, twice a week.

(38) Engineering Laboratory, once a week.
(Course I.—Experimental Engineering.)

(39) Mechanic Arts, twice a week.
(Course II.—Mechanic Arts.)

(40) Attendance on Motive-power and Shop Machinery, time to be assigned for each student.

FOURTH YEAR.

(41) Throughout the year: Original Surveys, Astronomical Observations, etc., twice a week.

(42) Mechanical Laboratory, twice a week.
(Course II.—Experimental Engineering.)

(43) Electrical Laboratory, twice a week.
(Course III.—Experimental Engineering.)

(44) Mechanic Arts, twice a week.
(Course II.—Mechanic Arts.)

(45) Fall Term: Graphic Statics, once a week.

REQUIREMENTS FOR ENGINEERING DEGREES.

YEAR.	B. S. C. E.	B. S. M. E.
FIRST YEAR.		
Throughout the year.	English, three hours. Chem. & Phys., five hours. Mathematics, five hours. French, five hours. Ch. & Ph. Lab'y, two times. Engineering, 1, two times.	English, three hours. Chem. & Phys., five hours. Mathematics, five hours. French, five hours. Ch. & Ph. Lab'y, two times. Engineering, 1, two times.
SECOND YEAR.		
Throughout the year.	Mathematics, five hours. Geology, three hours. English, two hours. Engineering, 9, three hours. Engineering, 16, two hours. Engineering, 8, one hour. Engineering, 2, two hours. Ch. & Ph. Lab'y, two times. Engineering, 36, one time. Engineering, 34, one time.	Mathematics, five hours. Geology, three hours. English, two hours. Engineering, 9, three hours. Engineering, 17, two hours. Engineering, 8, one hour. Engineering, 2, two hours. Ch. & Ph. Lab'y, two times. Engineering, 35, two times.

REQUIREMENTS FOR ENGINEERING DEGREES.—Continued.

THIRD YEAR.		
Throughout the year.	German, five hours.	German, five hours.
	Geology, three hours.	Geology, three hours.
	Engineering, 10, five hours.	Engineering, 10, five hours.
	Engineering, 3, two times.	Engineering, 4, two times.
	Engineering, 38, one time.	Engineering, 38, one time.
	Engineering, 37, two times.	Engineering, 35, two times.
	Engineering, 18, 20, 3 hours.	Engineering, 19, 21, 3 hours.
FOURTH YEAR.		
Fall Term.	Engineering, 11, five hours.	Engineering, 11 or 12, 5 hrs.
	Engineering, 45, one hour.	Engineering, 13, five hours.
	Engineering, 14, three hours	
Fall and Winter Terms.	Engineering, 22, two hours.	
	Engineering, 24, four hours	
	Engineering, 5, two times.	Engineering, 6, two times.
	Engineering, 42, two times.	Engineering, 42, two times.
Winter Term.	Engineering, 15, five hours	Engineering, 15, five hours.
	Engineering, 23, three hours	Engineering, 23, three hours
		Engineering, 25, two hours.
Spring Term.	Engineering, 26, three hours	Engineering, 27 or 29, 3 hrs.
	Engineering, 31, two hours.	Engineering, 31, two hours.
	Engineering; 28, three hours	Engineering, 28 or 30, 3 hrs
	Laws of Contracts, two hours	Laws of Contracts, two hours
	Engineering, 7, 100 hours.	Engineering, 7, 100 hours.
Throughout the year.	Engineering, 41, two hours.	Engineering, 35, two hours.
		Engineering, 32, two hours.
		Engineering, 33, one hour.

Summary of Hours.	College Hours.	Engineering Hours.	Total.
Freshman Year	20.	2.	22.
Sophomore Year	12.	10.	22.
Junior Year	8.	13.	21.
Senior Year	0.	19.	19.
Total			84.

NOTE.—The figure in parenthesis, preceding the name of a study, indicates the number of the course in that study. By consulting the number under that name, in the "Courses of Instruction in Engineering," the description of that course will be found. The other figure indicates the number of hours, or times the exercise is given per week. The work assigned for the drawing room, field practice, shops and laboratories increases the apparent number of hours per week. From two to three hours of department work in these branches, according to the assignment of the professor in charge, are construed to be equivalent to one class-room exercise of one hour duration.

Theses.

Each candidate for a degree in either of the Engineering Schools is required to prepare a thesis on some subject related to a branch of engineering or other department of science. The thesis must be either a design or a review of some machine, structure, or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis. The thesis, with its accompanying drawings, must be presented to the proper professor of Engineering, and will be deposited in the library of the University for permanent preservation.

Drawing Room

THE SCHOOL OF CIVIL AND MINING ENGINEERING.

PROFESSOR JOHNSTON.

The School of Civil and Mining Engineering was established by the Board of Regents of the University in 1888, and a course of study leading to the degree of Bachelor of Science in Civil Engineering went into operation that year Since that time a large amount of fine instruments and other valuable apparatus has been accumulated. New and commodious rooms and a laboratory have been provided in the new building known as Science Hall, and the courses of study have been so expanded and improved, that they are now believed to compare favorably with the courses of Engineering as taught in the leading technical schools of the country. The several courses of study have been arranged and planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering; so that graduates, guided by their theoretical education, and the practical training they may get during the course, may find profitable employment in the line of their profession and develop into useful investigators and scientific constructors. It is the aim of this school to train its students to meet the actual demands of engineering science and practice, as well as to fit them to keep pace with professional progress. Some of the prominent characteristics of this school are its advanced mathematics, which occupy a prominent place in all courses and extend up to the time of graduation. F eld, Laboratory and Shop Work cover a great amount of time, and a large number of subjects, giving the student an opportunity to become familiar with the instruments, methods and practices of engineering, that he could not possibly have in the older and more crowded institutions. Original investigation is encouraged and carried on at all times so that our graduates may not only fill subordinate positions, but become designers and constructors of important works as well. The work of the students is based upon an extended course on the Mechanics and Economics of Engineering; the object aimed at is to give as thorough a preparation as possible for the general purposes of the profession in the following subjects: The survey, location and construction of railroads, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder,

truss and suspension bridges, of towers, roofs and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors, coast and geodetic surveys; the determination of latitude and longitude and the location of true meridians; the projection of maps, the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the tests and selection of the materials of engineering; the design and construction of metallurgical works; the surveys of water works, canals, levees, revetments and retaining walls; the construction of coke ovens and the design of coal and coke plants; the construction and superintendence of power and power plants; the economic theories of railroad location and construction, track work and maintenance of way of railroads; the design and construction of hydraulic motors, and a course of instruction in mining especially adapted to the coal and ore mining peculiar to West Virginia.

The methods of instruction are by recitations, lectures, laboratory and field work. Original work is encouraged and required in all courses. A large amount of apparatus and instruments are free to the use of students, and each member of the class is required to use, and become familiar with, all the instruments and apparatus belonging to that course. The facilities for instruction are believed to be full and efficient and afford fine opportunities for advanced investigation. Laboratory work is required in chemistry, mineralogy, physics, geology, thermodynamics, hydraulics and civil engineering, for which purposes all the laboratories, collections and library of the University are open to the students of this department. The material equipment of this department is already large and is constantly increasing; at present it consists of the civil engineering laboratory equipped with a collection of apparatus and instruments for instruction in engineering believed to be complete and modern, consisting of transits, levels, theodolites, surveyors' compasses, aneriod barometers, plane table, solar compass, sextant clinometers, odometer, pendometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, blue printing outfit, complete sets of United States standard weights and measures, testing machines for strength of materials, as wood, iron, steel, stone, cement, mortar, &c; a drawing room containing a large number of descriptive geometry models, and models of bridges, furnaces and many other structures, and a large number of wood and plaster paris casts and models pertaining to descriptive geometry, architecture, &c.

The mechanical laboratory is very large and complete, containing a great variety of machines and scientific appliances relating to steam, electric and hydraulic power. Also a photographic laboratory is used in connection with the courses in engineering.

The library contains a respectable number of volumes of standard engineering literature, mathematics, and modern research and discovery, together with the leading periodicals of the day. The laboratories and collections in the schools of Chemistry, Physics, Geology, Paleontology, Biology and Mineralogy are large and complete, as will be described elsewhere.

WEEKLY SCHEDULE.

I YEAR.

FALL TERM

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY	FRIDAY	SATURDAY.
8:30	English.		English.		English.	Chem. and Phys.
9:30	Chem. and Ph.	Chem. and Ph.	Chem. and Ph.	hem. and Ph.	Chem. and Ph. Lab.	
10:30	Math.	Math.	Math	Math.	Math.	
11:30	French.	French.	French	French.	French.	
1:30		Freehand Dr.		Freehand.	Dr. Chem and Ph Lab.	

WINTER TERM

HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	English.		English.		English	
9:30	Chem. and Ph.	Chem and Ph.	Chem. and Ph.	Chem. and Ph.	Chem. and Ph. Lab.	
10:30	Math	Math.	Math.	Math.	Math	
11:30	French.	French.	French.	French.	French.	
1:30		Freehand Dr.		Freehand Dr.	Chem. and Ph. Lab.	

SPRING TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	English.		English.		English.	
9:30	Chem. and Ph.	Chem. and Ph.	Chem. and Ph.	Chem. and Ph.	Chem. and Ph	Chem. and Ph. Lab
10:30	Math.	Math.	Math.	Math.	Math.	
11:30	French.	French.	French.	French.	French.	
1:30		Freehand Dr.		Freehand Dr.	Chem. and Ph. Lab.	

WEEKLY SCHEDULE.—Continued.

II. YEAR.

FALL TERM

HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math.	Math.	Math.	Math.	F. P.
9:30	Des. Geom.	Surv.	Des. Geom.	Surv.	Des. Geom.	
10:30	Geology.	English.	Geology.	English.	Geology.	
11:30	Inst. Dr.		Inst. Dr		Mech. Eng.	
1:30		Chem. and Ph.		Chem. and Ph.	Mech. Arts.	

WINTER TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math	Math.	Math.	Math	F. P.
9:30	Des. Geom.	Surv.	Des. Geom.	Surv.	Des. Geom.	
10:30	Geol.	English.	Geol.	English.	Geol.	
11:30	Inst. Dr.		Inst. Dr.		Eng. Math.	
1:30		Chem and Ph.		Chem. and Ph.	Mech. Arts.	

SPRING TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math.	Math.	Math.	Math.	F. P.
9:30	Des. Geom.	Surv.	Des. Geom.	Surv.	Des. Geom.	
10:30	Geol.	English.	Geol.	English.	Geol.	
11:30	Inst. Dr.		Inst. Dr.		Eng. Math.	
1:30		Chem. and Ph		Chem and Ph.	Mech. Arts.	

WEEKLY SCHEDULE.—Continued.

III YEAR.

FALL TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math.	Math.	Math.	Math.	Eng. Lab.
9:30	German.	German.	German.	German.	German.	
10:30	R. R. Loca.	R. R. Loca.		R. R. Loca.		
11:30	Geol.		Geol.		Geology.	
1:30	Mech. Dr.		Mech. Dr.		F. P. 2 hrs.	

WINTER TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math.	Math.	Math.	Math.	Eng. Lab.
9:30	German.	German.	German.	German.	German.	
10:30	Eng. Con.	Eng. Con.		Eng. Con.		
11:30	Geology.		Geology.		Geol.	
1:30	Mech. Dr.		Mech. Dr.		F. P. 2 hours.	

SPRING TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30	Math.	Math.	Math.	Math.	Math.	Eng. Lab.
9:30	German.	German.	German.	German.	German.	
10:30	Eng. Con.	Eng. Con.		Eng. Con.		
11:30	Geol.		Geol		Geol.	
1:30	Mech. Dr.		Mech. Dr.		F. P. 2 hours.	

WEEKLY SCHEDULE.—Continued.

IV. YEAR.

FALL TERM.

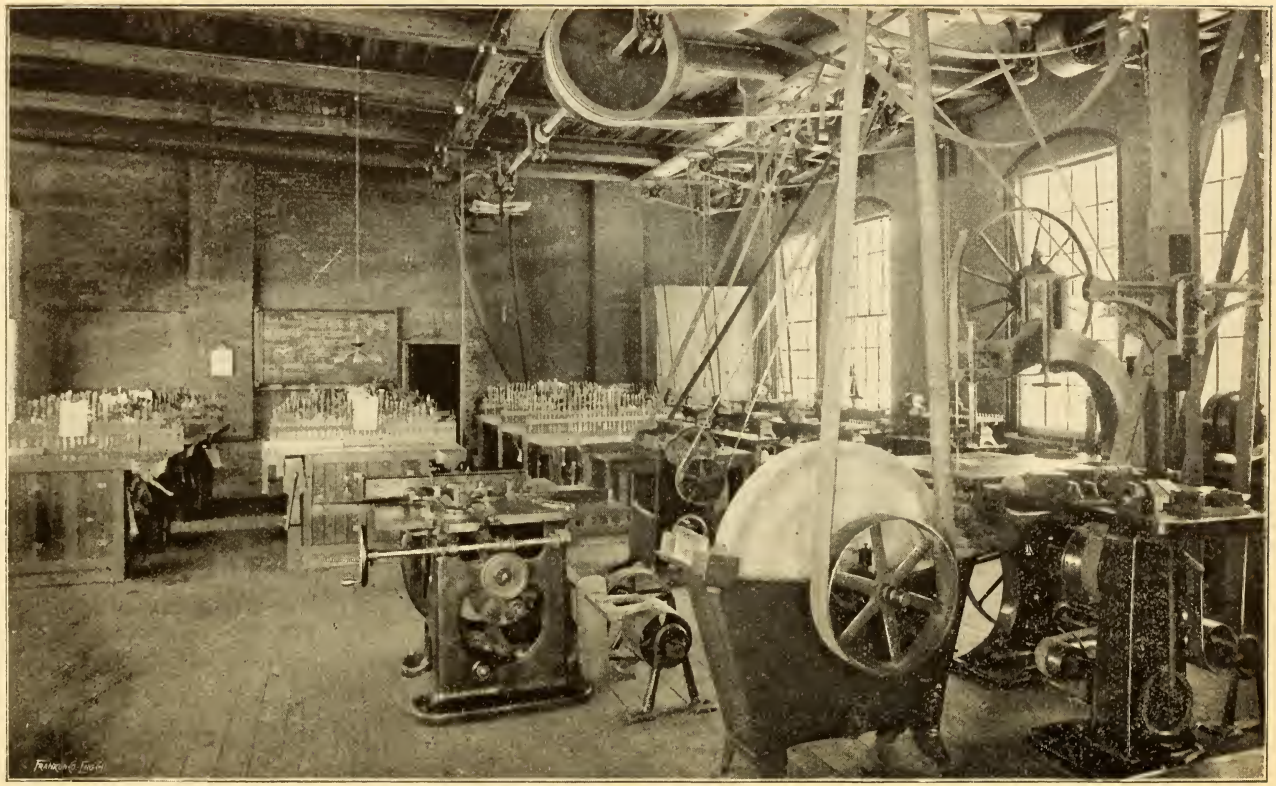
HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30 9:30 10:30 11:30 1:30	Roofs and Br. Stere. Civ. Eng.	Roofs and Br. Mining. Civ. Eng. Mech. Dr.	Roofs and Br. Stere. Civ. Eng.	Roofs and Br. Mining. Civ. Eng. Graphic Stat. Mech. Dr.	Roofs and Br. Stere. Civ. Eng. Eng. Lab.	

WINTER TERM.

HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30 9:30 10:30 11:30 1:30	Hydraulics. Power. Civ. Eng. Stere.	Hydraulics. Mining. Mech. Dr.	Hydraulics. Power. Civ. Eng. Stere.	Hydraulics. Mining. Mech. Dr.	Hydraulics. Power Civ. Eng. Stere Eng. Lab.	

SPRING TERM.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30 9:30 10:30 11:30 1:30	R. R. Econ. Metallurgy. Orig. Work.	Spec. Orig. Work. Law of Con.	R. R. Econ. Metallurgy. Orig. Work.	Spec. Orig. Work. Law of Con.	R. R. Econ. Metallurgy. Orig. Work. Thesis, 100 hours. Eng. Lab.	



Carpenter Shop.

Text-books for Civil and Mining Engineering.

Free Hand Drawing—Burns on Prospective, Models.
Mechanical Drawing—Thorne's Junior Intermediate and Senior Courses.
Descriptive Geometry—Faunce, Warren.
Surveying—Gillespie.
U. S. Coast and Goedetic Surveys.
R. R. Location—Searles' Pocket Book.
Architecture—Bullock.
Parsons on Track.
Merriman's Hydraulics.
Warren's Stonecutting.
Ihlsengs' Manual of Mining.
Mahan's Civil Engineering.
Railroad Economy—Wellington.
Greenwood's Metallurgy of Iron and Steel.
Haupt on Specifications.
Roofs and Bridges—Merriman.
Gurley's Manual.

Reference Books.

Surveying—Johnson, Hodgman.
Descriptive Geometry—Church, Thorne.
G. & M. Survey, U. S. Coast Survey Maps—Merriman's Geodesy.
Architecture—Goodyear, Fergusson.
Roofs and Bridges—Weisbach, Dubois.
Hydraulics—Fanning, Kutter & Ganguillet.
General—Trautwine's Pocket Book.
Cullen on the Turbine—Pearson's Sewage.
Kidder's Architecture—Scientific Publications.

The School of Mechanical Engineering and the Mechanic Arts.

PROFESSOR ALDRICH.

The School of Mechanical Engineering and the Mechanic Arts was established by the Board of Regents at the annual meeting of 1891. The State Legislature had made an appropriation, earlier in the same year, providing for the erection of a suitable building for the instruction in this School. In 1893, another appropriation was made by the Legislature for building an addition to the building already erected. The School is organized into the following departments of instruction: Mechanical Engineering, Electrical Engineering, Experimental Engineering, Drawing and Machine Design and the Mechanic Arts. The Practical instruction is carried on, as far as it is possible to do so, in the Mechanical Building.

The Course in Mechanical Engineering.

This is a four-years' course devoted to the subjects of Mechanical and Electrical Engineering and the Mechanic Arts. There are certain studies in common with the course in Civil Engineering, and a collateral course is given in English, Mathematics, Modern Languages and Science.

The object of this course is to enable young men who have pursued successfully the prescribed studies to enter upon the proper development of their professional work with intelligence and well directed application. Whatever special branch of mechanical engineering they may enter as their chosen or prescribed field is not in any measure directly prepared for in this course. It is the purpose to give thorough technical and practical training combined with academic courses containing the elements of a liberal education, as the best preparation for their future work, and as the proper foundation upon which they may build successfully their professional practice and reputation.

The technical instruction is supplemented throughout by practical instruction in drawing room, shops and engineering laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

In general, this course has been arranged to develop the principles and to prepare for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction and management of manufacturing plants, shops, factories, and systems of fire protection, lighting, heating and ventilating.

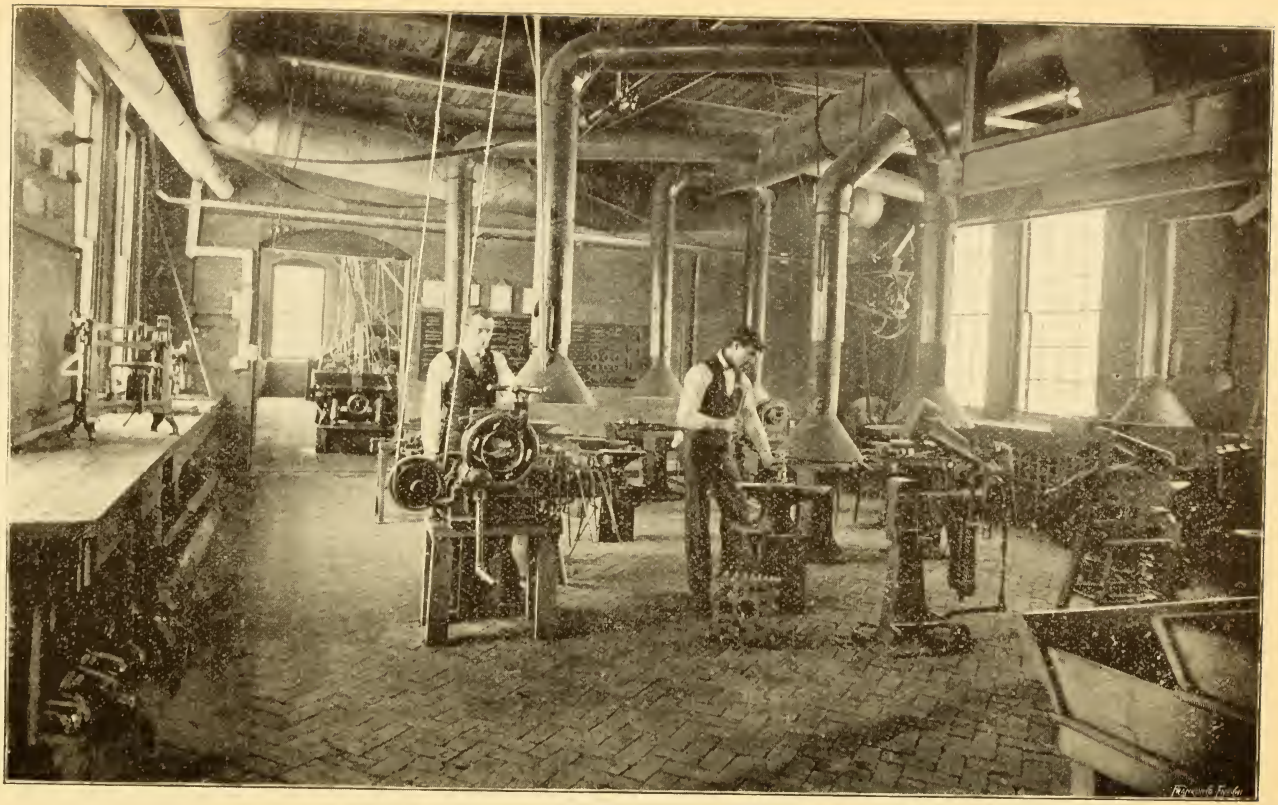
The requirements for admission, or the corresponding Scientific Preparatory Course, and the requirements for graduation leading to the degree of Bachelor of Science in Mechanical Engineering, will be found in the preceding general announcements, common to both schools.

Students are required to actively engage, for three years, in the Engineering Society. Also, at the close of each term of the Junior year and of the Fall and Winter terms of the Senior year, to prepare an original literary production on a technical subject allied to their general engineering work of that term.

Instruction in Mechanical Engineering.

The instruction is given by lectures combined with text-book study and recitations. Engineering problems and subjects are assigned to be worked out in the library or the drawing room, in the shop or in the laboratory. The several lines of work in any given study are co-ordinated as far as possible, as noted under the particular studies of this department. In this way time is economized. The student concentrates his attention. The several lines of work are focalized upon the particular question, problem or project in hand.

The several branches of instruction include: The mechanical technology of



Blacksmith Shop.

machine construction and the study of workshop appliances; mechanism and machinery for manufacturing, transportation and power transmission; the mechanics of engineering with the theory of the strength of materials and an experimental study of those most used in engineering; the thermodynamics of steam, gas, vapor and petroleum engines, compressed-air working and refrigerating machinery; the generation storage, transmission, distribution, utilization and measurement of power; the enconomics of engineering, cost of shop production and central station power distribution; and the journal meeting familiarizes the students with the literature of engineering journals, proceedings of technical societies, classification and indexing.

Instruction in Electrical Engineering.

At the end of the third year of the regular course in Mechanical Engineering, students have the option of substituting electrical work for the prescribed course. In other respects, the electrical students attend the regular mechanical course, excepting the class-room instruction in electrical engineering, as noted in the weekly schedule below.

Instruction is given in electrodynamics, the principles of design, construction, installation, operation, management and testing of electrical machinery, dynamos, motors, transformers and accessories; the distribution of electrical energy for light and heat and the electrical transmission of power.

Graduates from the electrical course are given the same degree as in Mechanical Engineering with a certificate attached to the diploma that special attention has been paid to electrical work.

Instruction in Experimental Engineering.

The instruction in this department is given in the engineering laboratory. The experimental work is carried along as nearly parallel as possible with the class-room instruction in the corresponding subjects for each term. Throughout such work the student is required to keep records of tests, facilitate his work by use of calculating instruments, tabulate and plot results, and make reports upon the tests in due form.

The instruction is organized in three courses:

Course I. – One Year Course in Experimental Engineering.

One three hour exercise period per week, as scheduled, for Saturday morning.

It is required of all engineering students in any of the regular four-year courses leading to degrees in engineering. The principles of design, construction, adaptation and calibration of standard engineering instruments for the measurement of length, area, volume, weight, power, speed, temperature and pressure, combined with qualitative and quantitative experimental work, are

taken up, followed by experimental work in the statics, dynamics and efficiency of mechanism and machinery, and in testing materials of engineering.

Course II.—One Year Course in Mechanical Laboratory.

Two three hour exercise periods per week, as scheduled, for Friday afternoon and Saturday morning.

It is required of all students of Mechanical Engineering in their senior year. Experimental work is carried on in thermodynamics, analysis of fuels and chimney gases, quality and flow of steam, and indicator practice with valve setting; flow and discharge of water, weir measurements, testing water meters, hydraulic motors and machinery, per ormance of injectors and pumps; combined tests of performance of boilers, engines, dynamos and power transmission.

Course III.—One Year Course in Electrical Laboratory.

Two three hour exercise periods per week, as scheduled, for Friday afternoon and Saturday morning.

It is required of all students taking the optional course in Electrical Engineering. Experimental work is given in electrical measurements, calibrations, computations and testing, with particular reference to dynamos, motors and electrical instruments and accessories of central stations, power plants and transmission machinery.

Instruction in Drawing and Machine Design.

Till the beginning of the third year the instruction in Drawing follows that of the Civil Engineering students. After that it is developed into a technical course with special reference to the requirements of the students in Mechanical Engineering.

The instruction in this department is given in the Drawing Room of the Mechanical Building. It is carried along with actual construction of typical detail machine elements in the shops. Frequent reference is made to existing works in the mechanical shops and laboratory as well as outside the institution. It affords an opportunity for the graphical treatment of engineering problems arising in the class-room instruction of any given term.

Tinstruction is organized into two corpses.

Course I.—One Year Course in Drawing and Machine Design.

There are two three-hour exercises per week, which course is required of all students of Mechanical Engineering in their junior year. It comprises the analysis of mechanisms, machine tools and shop appliances; the designing of mechanical movements; the graphical statics of mechanisms; conventional

and rational designing of structural details; adaptation of commercial sizes, proportioning fastenings, flanges, bearings, rotating pieces, connecting links, and mechanism and machinery of power transmission.

Course II.—One Year Course in Drawing and Machine Design.

It consists of two hours of claas-room instruction and two three-hour exercise periods per week. It is required of all Mechanical and Electrical Engineering students in their senior year. For the latter, electrical problems and projects are assigned instead of the more specially mechanical subjects. Designs of structural details of steam engines, boilers and accessories are taken up, with special attention given to the analysis and design of valve gears; and in the winter term, the assembled designing of prime movers and motive-power machinery.

Thesis designs are then selected or assigned for a complete set of plans for a project, such as special plant appliances, machine tools or particular manufacturing machinery, heating and ventilating systems, motive-power machinery, central station, power and manufacturing plants, with specifications, bills of material and contracts.

Instruction in the Mechanic Arts.

The instruction in this department is given in the work shops of the Mechanical Building. It is organized into two courses:

Course I.—One Year Course in Mechanic Arts.

One three-hour exercise period per week, as scheduled below, for Saturday morning, of the first year.

It is open to all students of the University.

It is required of all Senior Scientific Preparatory students who are preparing to enter any of the regular four-year courses in Engineering, Agricultural or Commercial work.

It is required of all students in any of the regular four-year courses in Engineering or Agriculture, who have not taken it previously.

Wood-working, instruction in carpentry, joinery and other bench work and in wood-turning is followed by metal-working instruction in iron and steel forging and chippings, filing and fitting iron work at the bench.

Course II.—Three Year Course in Mechanic Arts.

Two three-hour exercise periods per week, throughout the year, as scheduled below.

It is required of all students taking the regular course in Mechanical Engineering.

It includes Course I., as above given, and pattern-making foundry work,

steel forging and tool-smithing, sheet-metal work, pipe-fitting and boiler work, machine shop practice, machine construction, mechanical drill and attendance on shop and motive power machinery.

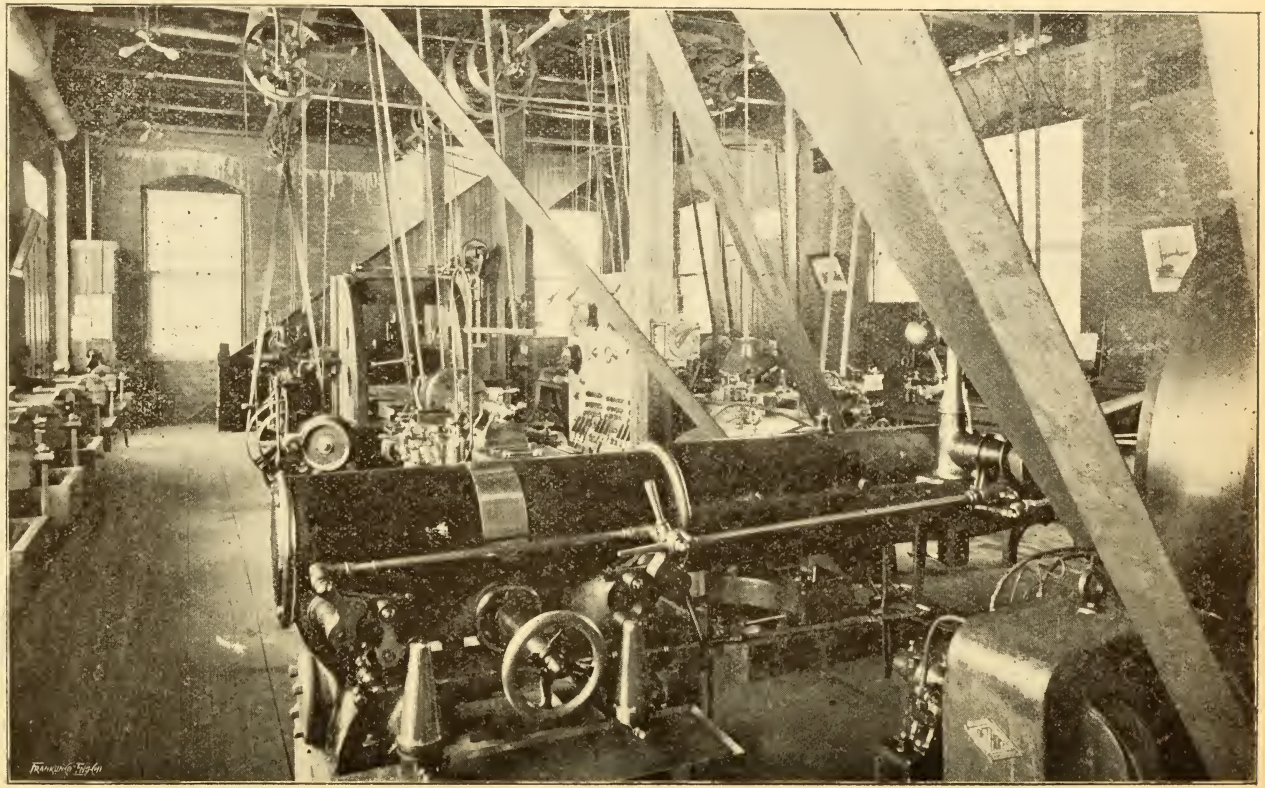
Weekly Schedule for the Three-Year Course in the Mechanic Arts.

YEAR.	TERM.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
	Fall.					Pattern Making and Casting.	Woodworking, Bench and Lathe.
I.	Winter.					Steel Forging, Casting.	Iron and Steel Forging.
	Spring.					Sheet-Metal, Pipe and Boiler Work.	Iron Working, Chipping, Filing, Fitting.
II.	Through-out Year.		Machine Tools.		Machine Tools.		
III.	Through-out Year.		Machine Construction.		Machine Construction.		

The exercises are of three hours duration,—1:30 to 4:30 P. M.; on Saturday, 8:30 to 11:30 A. M.

During the first year of instruction in the Mechanic Arts, the students are assigned a course of home study and reading. It is arranged parallel to and in connection with their corresponding exercises. Recitations are held upon these and other features of the work. At the end of each term, examinations are held upon the reading, study and shop work carried on during that period. An examination piece or project work is also assigned, according to the character of the instruction.

Through the entire course each student is required to keep an account, on suitable blanks, of his time and the material which he uses for any given work. In this way he is early acquainted with the economics of shop production by giving attention to the two elements which go to make up the cost of the same.



Machine Shop

Facilities for Instruction.

Practical instruction in Mechanical Engineering and the Mechanic Arts is provided for in the equipment of the Mechanical Building. Standard measures and calculating instruments, laboratory appliances and apparatus are provided for qualitative and quantitative experimental work in engineering.

The electric light and power plant of the University is located in the basement of the Mechanical Building. The boilers, triple-expansion engine, condensers and electrical machinery, as well as the motive-power machinery of the shop, have been specially selected and arranged for experimental work in mechanical and electrical engineering. In the Drawing Room, models of the typical valve gears are used for instruction. Samples of raw materials and of manufactured products are collected, forming the nucleus of an engineering museum. Such machine tools and workshop appliances for working wood and metal, as well as small tools, stock and material, are supplied as will enable the work of instruction to be carried on efficiently in the Mechanic Arts.

MECHANICAL ENGINEERING COURSE—WEEKLY SCHEDULE.

FIR T YEAR.

TERM.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Through-out the year.	8:30	Mir or English.		Min r English.		Minor English.	Chem. and Phys. Laboratory.
	9:30	Chem. and Phys.	Chem. and Phys.	Chem. and Phys.	Chem. and Phys.	Chem. and Phys.	
	10:30	Math. (1)	Math. (1)	Math. (1)	Math. (1)	Math. (1)	
	11:30	Minor French.	Minor French.	Minor French.	Minor French.	Minor French.	
	1:30		Free Hand Drawing.		Free Hand Drawing	Ch. and Ph. Labor'y.	

SECOND YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Through-out the year.	8:30	Math. (2)	Math. (2)	Math. (2)	Math (2)	Math. (2)	Mechanic Arts.
	9:30	Descrip. Geom.	Mech. Technology.	Descrip. Geom.	Mech. Technology.	Descrip. Geom.	
	10:30	Geology.	Major English.	Geology.	Major English.	Geology.	
	11:30	Instrumental Draw.		Instrumental Draw.		Mechanics of Eng'g.	
	1:30	Ch. and Ph Lab.		Ch. and Ph. Lab.		Mechanic Arts	

THIRD YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Through-out the year.	8:30	Mechanics.	Mechanics.	Mechanics.	Mechanics.	Mechanics.	Engineering Lab-oratory.
	9:30	Minor German.	Minor German.	Minor German.	Minor German.		
	10:30		Machinery.		Machinery.	Journal Meeting.	
	11:30	Economic Geology.		Economic Geology.		Economic Geology.	
	1:30	Drawing and Des'g.	Mechanic Arts.	Drawing and Des'g.	Mechanic Arts.		

MECHANICAL ENGINEERING COURSE—WEEKLY SCHEDULE.—(Continued.)

FOURTH YEAR.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Fall.	8:30	Roofs and Bridges, or *Electro-dynamics.*	Roofs and Bridges, or *Electro-dynamics.*	Roofs and Bridges, or *Electro-dynamics.*	Roofs and Bridges, or *Electro-dynamics.*	Roofs and Bridges, or *Electro-dynamics.*	Engineering Laboratory.
Winter.	8:30	Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics.	Hydraulics.	
Spring.	8:30	Economics of Eng'g, or *Electric Light.*	Specifications and Contracts.	Economics of Eng'g, or *Electric Light*	Specifications and Contracts.	Economics of Eng'g, or *Electric Light.*	
Fall.	9:30	Thermodynamics.	Thermodynamics.	Thermodynamics.	Thermodynamics.	Thermodynamics.	
Winter.	9:30	Power Plants.	Machinery.	Power Plants.	Machinery.	Power Plants.	
Spring.	9:30	Metallurgy, or *Electric Power.*		Metallurgy, or *Electric Power.*		Metallurgy, or *Electric Power.*	
	10:30	Designing Machinery.	Laws of Contracts.	Designing Machinery.	Laws of Contracts.	Journal Meeting.	
	11:30						
	1:30	Drawing and Designing.	Mechanic Arts.	Drawing and Designing.	Mechanic Arts.	Engineering Laboratory.	

Students wishing to make a specialty of Electrical work select the *optional studies* as indicated in the Senior year of the Mechanical Engineering Course.

Text Books for the School of Mechanical Engineering and the Mechanic Arts.

Bench Work in Wood.—Goss.
First Lessons in Metal Working.—Compton.
Workshop Appliances.—Shelley.
Mechanical Technology of Machine Constructions.—Klein.
Elementary Mechanism.—Stahl & Woods.
Kinematics of Machinery.—Kennedy.
VanNostrand's Science Series, No. 54.
Mechanics of Machinery.—Kennedy.
Valve Gears.—Peabody.
Elements of Machine Design.—Unwin.—Bevis & Low.
Elementary Machine Design.—A. W. Smith.
Mechanics of Engineering.—Church.
Mechanics of Materials.—Merriman.
Text-Book of Materials of Construc ion.—Thurston.
Manual of Steam Boilers.—Thurston.
The Steam Engine and Other Heat Engines.—Ewing.
Experimental Engineering.—Carpenter.
Development and Transmission of Power.—Unwin.
Mechanical Engineers' Pocket Book.—Kent.

Engineering Society.

An Engineering Society has been organized in connection with the Engineering Schools, whose object is the investigation and discussion of scientific subjects. It is conducted by students of the Engineering Schools and meets once a week. All engineering students are required to join this organization and perform such work as its rules require. Students taking a full four years' course at this institution, for the degree of B. S. C. E. or B. S. M. E., are required to do three years' work in this society.

A special Engineering Library has been established for the use of this society, containing standard text and reference books on technical subjects, and the leading scientific magazines and periodicals.

Commencement Hall and Gymnasium.

THE LAW COLLEGE.

EX-JUDGE OKEY JOHNSON.

Dean and Professor of Constitutional Law, International Law, Corporations, Criminal Law, Criminal Procedure and Parliamentary Law.

ST. GEORGE T. BROOKE.

Professor of Common and Statute Law.

W. P. WILLEY.

Professor of Equity Jurisprudence, Commercial Law and Evidence.

The Law Department of the University aims to prepare students for the practice of law in any part of the United States.

It aims to make not merely theoretical but practical lawyers who will go from the lecture room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession and to start him in life with a high idea of professional ethics and dignity.

The Course.

The full course covers the branches of Common and Statute Law, Corporations, Criminal Proceedure, Constitutional and International Law, Commercial Law, Criminal Law, Maratime Law, Equity Jurisprudence, Evidence, Pleading and Practice.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Notes on Common Law Pleading and Practice in West Virginia by Professor Brooke, Williams on Real Property, and for reference the Code of West Virginia and subsequent Acts of the Legislature.

The text-books are supplemented by lectures each day, and it is the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-books used in Constitutional Law are the "Federalist" and Cooley's Principles of Constitutional Law. This, however, is supplemented by lectures upon our Constitutional history from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and the decisions of the Supreme Court of the United States interpreting its provisions, are also the subjects of lectures.

The text-book used in International Law is Glenn's International Law.

The text-book used in Criminal Law is Clark's on that subject; in Criminal Procedure, Clark's Criminal Procedure.

The text-book on Corporations is Angell and Ames on Corporations.

The text-book used on Parliamentary Laws is Roberts' Rules of Order.

The text-books in the branches of Equity Jurisprudence and Mercantile Law are Bispham's Equity and Bishop on Contracts, with reference to Parsons, Story, Barton, Addison and other authors.

The course of lectures and study in Equity embraces:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisdiction; Equity Pleading and Practice.

Lectures on Mercantile Law embrace the whole range of topics properly belonging to this department. including the laws relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, etc.

The lectures are supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course is covered by the lectures of one year, thus enabling the student, if he is prepared for it, to complete the course in one year. But whether he shall give one or two years to the course is determined by his qualifications when entering. The Junior and Senior divisions of the course are found on a subsequent page.

As one term is not dependent on another, as respects many of the topics, a student may enter at the beginning of either term; but it is always advisable to enter during the Fall term if possible.

The work of the year is divided among the three terms as follows:

FALL TERM.

Constitutional Law. International Law. Corporations. Criminal Law. Parlimentary Law.	DEAN JOHNSON.
Rights of Persons and Things—Blackstone. Common Law Pleadings.	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleadings. Evidence. Sales.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Corporations. Criminal Law. Criminal Procedure. Parlimentary Law.	DEAN JOHNSON.
Blackstone, 1st and 2d books (continued.) Blackstone, 3rd book (begun.)	PROF. BROOKE.
Agency. Partnership. Surety and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, etc. Evidence.	PROF. WILLEY.

SPRING TERM.

Constitutional Law. International Law. Corporations. Criminal Procedure. Parliamentary Law and Practice.	DEAN JOHNSON.
Blackstone, 3d book. Real Property.	PROF. BROOKE.
Bailments. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

The following are the Junior and Senior divisions of the course:

JUNIOR COURSE.	SENIOR COURSE.
Blackstone.	Common Law Pleading.
Rights of Persons.	Real Property.
Rights of Things.	Negotiable Paper.
Torts.	Partnership.
Criminal Law.	Suretyship and Guaranty.
Criminal Procedure.	Evidence.
Statute Law.	Equity Pleading and Practice.
Contracts.	Bailments.
Agency.	Insurance.
Evidence.	Corporations.
Sales.	Practice in the Courts.
International Law.	Constitutional Law.
Parliamentary Law.	

In June, 1895, Judge Okey Johnson was elected Dean of the Law Faculty, and now a full and thorough course is had in Corporations, Criminal Law, Criminal Procedure, and Parliamentary Law, and the other Professors have full time to devote to their subjects.

Methods of Instruction.

The methods of instruction consist of Lectures and Examinations, from approved text-books read in course, the drawing of the various legal papers requisite in the ordinary practice of the law, and the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day and of such portions of the text-books as were the subjects of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review on the entire course. They will all be in writing.

Schedule of Lectures.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8:30 Prof. Brooke.	Junior. Blackstone.	Senior. Pleading and Real Prop'ty.	Junior. Blackstone.	Senior Pleading and Real Prop'ty.	Junior. Blackstone.	Senior. Pleading and Real Prop'ty.
9:30 Prof. Willey.	Senior. Equity.	Senior. Equity.	Junior. Com'r Law.	Junior, Com'r Law.	Senior. Com'r Law.	Junior.
10:30 Dean Johnson.	Junior. International Law.	Senior. Corporations.	Junior. Crim. Law & Procedure.	Senior. Constitutional Law.	Junior. Crim. Law & Proc'dure.	Senior. Parliamentary Law.
11:30 Prof. Willey.		Senior. Evidence.				

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled on this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial tables. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice; to bring suits; draw papers, pleadings, briefs, etc,, and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, etc. The Moot Court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning by actual doing all the forms of court practice; while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen and scholars as well as lawyers. The system of Moot Court is thorough.

Each of the Professors holds Court once a week, in his room, for the trial of law cases.

There is a Supreme Court of Appeals composed of all three Professors, the Dean sitting as President of the Court, to which all appeals from decrees and writs of error to his judgment, rendered in the three several Circuit Courts, may be taken. The system works admirably, and gives the student the practice in all the courts, following his case from the Circuit Court, where it is brought, to the Supreme Court of Appeals, which determines finally all State cases. Trials are occasionally held in Commencement Hall and are open to the public.

Requirements for Admission and Degrees.

Any person is at liberty to enroll in this College, and have a seat assigned for attendance upon the lectures. However, if the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed. Ladies are admitted the same as gentlemen.

The Law College does not hold itself responsible for anything but the attainments of the student in his law studies; nevertheless, the degree of his proficiency in the English branches is estimated in grading him for a degree in law. If a student realizes that he is deficient in general education, he can enter some

of the classes in either the Preparatory School or the Academic College of the University in connection with his law studies. But this is a matter resting entirely with the student.

The qualifications of a student for receiving the degree of Bachelor of Laws are not measured by the time he has spent in completing the course; that may be one year, or two years, or many years. But the sole test of his title to the degree is his work in the classes and his ability to successfully pass a rigid examination on the whole course and thus demonstrate that he is worthy of it. The value of a diploma from this department will not be impaired by conferring it where it is not merited. Therefore, time is not made a test in any case, except that a student *must have been in attendance upon the lectures at least one scholastic year* before he be admitted to the examination for a degree. If he fails to reach the standard in his first examination, he may apply for a second examination one year thereafter, whether he has continued in attendance at the University or not.

On and after the opening of the University year in 1897, no student will be admitted to an examination for any of the degrees of the Law Department until he has been in attendance upon the Law College for two years; *provided*, that any student may, on matriculating, apply to the Law Faculty for advanced standing, and on satisfying the Law Faculty by examination and otherwise, that he has completed the branches included in the Junior year, or their equivalent, he may be permitted to enter the Senior class and become a candidate for a degree at the end of one year.

Any student who completes less than the whole course, will be awarded a certificate by the Law Faculty for the work done and the time spent in the Law College.

Degrees Conferred.

The degrees offered in this college are: Bachelor of Laws, Bachelor of Arts in Law, Bachelor of Science in Law.

The regular law degree—*Bachelor of Laws*—requires the completion of the full law course as set forth on preceding pages. Students receiving this degree are admitted to practice in any of the courts of this State without examination, by act of the Legislature. Students from other States are accorded the same rights, and their certificates of admission entitle them to practice in most of the other States.

The degree of *Bachelor of Arts in Law* requires the completion of the course in law together with a selection from the branches comprised in the regular course for the Bachelor of Arts degree, sufficient to occupy the four years' course required for the latter degree.

For the degree of *Bachelor of Science in Law*, a similar requirement is made to that in the course for the degree of *Bachelor of Arts in Law*. The courses in Law and in Bachelor of Science are combined, and the former is accepted as an equivalent for so much of the latter as it represents in the four years' requirement of study.

Expenses.

Tuition in the Law Department is free to West Virginia students.

Students from other States are charged $8.00 a term, or $24.00 a year.

The ordinary expenses for boarding, etc., are as low as at any other University town in the United States.

The summary of the expense of boarding, etc., given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

The text-books absolutely essential to the successful prosecution of the studies of the law school are: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence, Bishop on Contracts, Bispham's Equity, The Federalist, Glenn's International Law, Cooley's Principles of the Constitution, Clark's Criminal Law and Clark's Criminal Procedure. These books are kept at the University and sold to the students at cost.

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a thorough mastery of the principles of Law. Law Schools have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions.

The advantages of a University Law course can scarcely be over-estimated to the young man who aspires to become thoroughly fitted for the profession of law, constantly proving the old maxim, that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

The almost universal experience is that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded. He makes haste to finish rather than master the course. The active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention. He reads in a superficial manner enough branches to enable him to secure license to practice, believing that he will have time enough when he is already admitted to the bar to finish his studies. But the ground work of a successful professional career is forever neglected, as a rule.

The University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences

that are elevating and refining; produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

The advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies and Moot Courts are of no small consideration.

Eminent Opinions.

The time has gone by when an eminent lawyer, in full practice, can take a class of students into his office and become their teacher. Once that was practicable, but now it is not. The consequence is that law schools are now a necessity.—*The Late Chief Justice Waite.*

There is little, if any, dispute now as to the relative merit of education by means of law schools, and that to be got by mere practical training or apprenticeship as an attorney's clerk. Without disparagement of mere practical advantages, the verdict of the best informed is in favor of the best schools.—*Report of the Committee on Legal Education, to the American Bar Association, Auguts* 21, 1879, *at Saratoga, New York.*

Professor Bryce, in "The American Commonwealth," attributes the superior attainments of the members of the legal profession in the United States "to the extraordinary excellence of many of the law schools."

Mr. Heron, of Dublin, in his work on the History of Jurisprudence, declares that in the matter of legal reform, and in that of legal authorship, the United States have surpassed England, and he attributes the fact, "to the superior legal education which the American lawyers receive, and to the schools of law established throughout the United States."

Lord Chief Justice Russell of England, in a learned article on "The Bar as a Profession," published in the Youths Companion of February 20, 1896, (Mr. Justice Holmes of Massachusetts having published an article on the same subject in the same paper,) said: "Mr. Justice Holmes speaks with just pride of the system of legal education in the United States. It is, in my opinion, far superior to that existing in these islands. Its superiority, I think, mainly consists in its systematic teaching of the historical and scientific aspects of law before the actual practical workaday law is dealt with. To the absence here of this system, I largely attribute the fact, which I deplore, that with but few exceptions, our legal treatises are analyses of decided cases. Our legal arguments at the bar are a nice discrimination of those cases, and the deliverances from the judges but little more than able efforts to establish analogies or differences between the case in hand and reported authority."

Interior of Chapel.

SUMMER LAW SCHOOL.

Announcement of Summer Term.

The first regular Summer term of the West Virginia University Law School will open Tuesday, June 23rd, 1896, at 8:00 A. M., and continue for six weeks, ending Tuesday, August 4th, 1896. Instruction will be given by all the Law Faculty.

Admission.

The courses offered are open to all persons who may desire to take advantage of them; no preliminary examination for admission is required.

In other schools experience has shown that the Summer courses are of special advantage to the following persons:

First. Those who are preparing to be examined for admission to the bar in West Virginia and elsewhere.

Such students, whether they have finished their previous studies in a law school or in an office, find it very helpful to have a comprehensive and systematic review of the main branches of the law, before presenting themselves for admission to the bar. The needs of such students are constantly in view.

Second. Those who desire an outline survey of the general field of law, together with a discussion of the general principles, authorities and cases, before entering upon the details in legal studies required for admission to the bar. This will certainly simplify and give greater zest to the instructive details that must be mastered.

Third. Students in this and other law schools who wish to review the main subjects of their course, to assist them in their final examinations, the passing of which is essential to their degree.

Fourth. Young attorneys who have not had the advantage of a regular drill in the law school, and desire to spend their summer vacation in a more systematic study of the law than they can possibly take in their offices.

The following regular courses are given during the Summer term, and all students registered in the school are entitled, upon the payment of the fee, to instruction in all the courses:

1.—Corporations.
2.—Criminal Law.
3.—Criminal Procedure.
} Dean Johnson.

4.—Torts. 5.—Real Property. 6.—Pleading.	Professor Brooke.
7.—Contracts. 8.—Equity. 9.—Evidence.	Professor Willey.

Hours and Methods of Instruction.

The regular class room work covering the nine general courses will occupy three hours a day, or eighteen hours a week: making one hundred and eight hours for the term.

The method of instruction is by lectures, supplemented by examinations each day on the previous lecture and examination and discussion of leading and illustrative cases, and collateral reading. The students will have the benefit of the Law Library.

General expenses are the same as to the students at the University, after the tuition fee is paid.

The fee for the whole course of one hundred and eight hours is $30.00 payable in advance to the Dean of the Law Faculty, at his lecture room in the University Building, where each student will be registered, and then will be entitled to all the privileges of the Course.

SCHOOL OF PEDAGOGY.

PROFESSOR MILLER.

This is a day of specialization. To be successful in any high degree, each individual, by special application and discipline, prepares himself for the kind of work in which he would engage. After two or three years of careful study, the law student rounds out his course with a degree at the University Law School. The medical student is not recognized in his profession until he has had years of training under skillful guidance. For a long time any one was allowed to preach, but now most denominations require a course at a theological seminary, and this often after a regular college course of four years. There is a growing conviction that *teaching*, as well as law, medicine or theology, is a science and demands thorough professional training. Shall less be required of the instructors of the youth of our land? This question is being answered very emphatically in the multiplied agencies for increasing the efficiency of the teaching force of to-day, such as Schools of Methods, Departments of Pedagogy, Educational Psychology, etc. A writer in a recent number of an educational journal states that within the last ten years not fewer than seventy-five colleges and universities in the United States have established Chairs of Pedagogy, or give instruction in the Art and Science of Teaching.

The University being recognized as the head of the educational system of the State, should supply the demand made upon it for furnishing the normal schools, academies, and more advanced grades of public schools with superintendents, principals and assistants.

Many of the best educational positions in West Virginia are now filled by graduates of the University, and there is an increasing demand, here and elsewhere, for men and women competent to take charge of schools of high grade. Encouragement to teachers with this degree of proficiency, is found in the fact that salaries have been increased very materially within the last few years.

In offering these courses, the University does not enter into competition with existing institutions in the field of normal or academic instruction; and while the courses of this department are open to all collegiate students, it is suggested that they will prove most helpful to those who are advanced in their other studies, particularly in English. In order to pursue the course in Child-Study, the student must have some knowledge of Psychology.

The objects in offering a course in Pedagogy in this institution are:

I. To prepare University students for the higher positions in the public schools of the State.

II. To aid in harmonizing our educational system by bringing the secondary schools into closer relations with the University.

III. To secure to teaching the rights, prerogatives and advantages of a profession.

This course includes, as exhibited below, Science and Art of Teaching, History of Education, Educational Psychology, School Management, State Laws and Requirements for Free Schools, Methods, etc. Five hours a week throughout the year are given to the exercises of the course. Over two hundred of the latest and best works on Pedagogy and other educational subjects have been added to the University library, and the number of works in these and kindred subjects will be constantly increased.

Courses of Instruction.

1. Practical.—Embracing the organization and management of schools; courses of study; supervision in city, town and district schools; school buildings and appliances; school law, etc.

2. Scientific.—A study of the principles underlying the art of teaching; educational psychology; the philosophy of education.

3. Historical.—Origin and growth of the school system in West Virginia; the history of education in the United States; education in various ages and countries; eminent educators and educational epochs.

4. Child-Study.—This course will deal with the physical, intellectual and moral development of children, as far as such investigation is possible with the means at command. In other words, the being to be educated will be studied along with the methods of educating him. The work will consist of original investigation as related to the observation and experience of the student, to a study of the statistics and data concerning the development of the senses, emotions, etc., collected from various schools, and of studies inthe literature of the subject. The educational journals of the day are replete with the discussion of the subject of Child-Study; in fact. it may be denominated the educational "fad' of the hour; but from this careful study of child-nature will come much that is helpful and valuable to both parent and teacher.

These courses are distributed as follows:

FIRST YEAR.

Fall Term.—History of Education in West Virginia; Morgan and Cork, and lectures; Elements of Pedagogy; White.

Winter Term.—Education in the United States, Boone; Theory and Practice; Page and DeGarmo; School Hygiene.

Spring Term.—School Management, White; Educational Reformers, Quick Child-Study.

SECOND YEAR.

Fall Term—Grading and classification of Schools according to the Manual of State Superintendent Lewis; School of Supervision, Payne; School Systems—District, County and State.

Winter Term—Compayre's Lectures on Pedagogy; Educational Psychology, with collateral reading; Methods of Teaching.

Spring Term.—Compayre's History of Pedagogy; Papers and Discussions; Child-study and original investigation.

These courses will be supplemented by lectures and collateral readings, the Pedagogical Library and educational magazines furnishing abundant material for wide investigation in this field. A regular course of reading has been outlined for this department, and students are required to prepare papers and critques on the various topics presented.

The recitation hour is 11:30 daily, and, when necessary, classes are organized for afternoon work.

COMMERCIAL SCHOOL.

PROF. D. M. WILLIS.

All students in this School are under the control of the teachers in charge of the School, so far as their work is in this School.

Announcement.

There are business Colleges and Commercial Schools, but these do not demand that high standard of their graduates which should characterize the commercial training of this age. The object of this School Course is to lay simply the foundation for qualifying thoroughly the student for the work of commercial life. The commercial graduates should be able to enter upon their career as "business men," but they are not. The "business man" of to-day is a dominant factor in all the industrial and commercial enterprises. He is one of the great pillars of society. He has become one of the controlling agents and forces in all commercial, political, social, moral and church affairs. He is one of the indispensable agents in all religious, charitable and philanthropic efforts. From this rank are drawn some of the best men to fill legislative halls in State and Nation. He is such a potent factor in the world of activities that the time has come when he needs a special discipline and culture which will enable him to do his work successfully and take at once first rank as a professional "business man." This School can only lay the foundation for such a thorough commercial education as is now in demand. It makes no pretentions at graduation, at present.

Statement.

The instruction of this course is given, for the present, mainly in connection with the work done by the Professors in other Colleges of the University or in the Preparatory School.

The curriculum of study has been articulated with other courses so as to provide as ample a course as is now possible, without any additional professors for studies already taught in the University.

COURSES OF INSTRUCTION.

Preparatory Course.

The following is needed to enter this School properly:

I. *English.*—English Grammar, Analysis, Composition and Rhetoric.

The essentials of English Grammar will be required; an ability to analyze English sentences correctly; a sufficient knowledge of composition to enable the candidate to write with ease and precision a business letter or composition on an assigned subject, correctly applying the rules of orthography, of the use of capitals, of punctuation, etc , and a knowledge of Rhetoric such as is contained in Genung's Outlines of Rhetoric.

II. *Arithmetic.*—Completed; Ray's, Greenleaf's or equivalent.

III. *Algebra.*—Elementary Algebra; Ray's, Milne's or equivalent completed.

Higher Algebra; Wells' University Algebra, or Ray's Higher Algebra to Theory of Equations.

IV. *Geometry.*—Plane Geometry, completed; Wells' or Brook's Geometry or equivalent.

V. History of the United States, Fiske or Montgomery.

VI. *Elementary Science.*—Physiology and Hygiene, Hartigan, Steele or Cutter, equivalent of High School Course; and Field Botany, Wood's text or equivalent; or an equivalent in Natural Philosophy may be substituted—Gage's Introduction to Physical Science, Avery, Steele, or its equivalent.

VII. *Physical Geography.*—As much as is usually given in High and Normal school courses—Houston, Mitchell, or equivalent.

VIII. *Industrial Drawing.*—Elementary Free Hand and Simple Instrumental Drawing, equivalent to about one hundred hours of instruction.

In general, all candidates for admission to the Commercial Courses should have satisfactorily completed the Course of the Preparatory School, or its equivalent.

An accurate and working knowledge of the fundamental elements of a thorough education should be acquired. Having done this, the special courses can be pursued to better advantages in this school.

Special Courses.

In order to accommodate the student who can not conveniently take the full course, but desires a knowledge of Book-keeping, Stenography, etc., the following arrangements have been made:

Any student wishing to enter this School for Book-keeping, may do so, if he can pass satisfactorily the required examinations in Mathematics and English Grammar, or produce satisfactory certificates of proficiency in these branches.

Students wishing to enter for Stenography may do so by passing a satisfactory examination in English, or on presenting satisfactory certificates of proficiency in the elements of English.

1. *Book-keeping.*—The instruction is both theoretical and practical. After students have acquired a knowledge of the fundamental principles of book-keeping, they are required to enter the practical department, where they are drilled in the more advanced and comprehensive books. They enter into real business practice. After completing the work in this department, they take up the various sets, as Coal, Lumber, Shipments and Consignments, Jobbing and Manufacturing, Installments and State Agencies, Partnerships and Joint Stock Companies and Railroading and Banking. Each pupil keeps a set of books for the various branches of business named above.

2. *Commercial Law* contains a concise, yet fairly comprehensive treatment of Contracts, Negotiable and Accommodation paper, Sales of Personal Property, Partnerships, Corporations and Joint Stock Companies, Guaranty and Suretyship, Common Carriers, Inn Keepers, Bailments, Insurance, Liens, Interest and Usury, Telegraph and Telephone Companies, Copyrights, Trade Marks, Landed Property, Real Property, Real Estate, Conveyances, Landlord and Tenant, Domestic Relations, Master and Servant, Husband and Wife, and all ordinary legal business forms.

3. *Stenography* is one of the requirements of the Commercial Course. The instruction embraces a comprehensive drill on all elementary principles and characters, progressive dictation, introduction of word-signs and phrase words, phrasing, constant speed practice, the writing and transcribing of business letters upon the typewriter, law testimony, essays, speeches, sermons, legal documents and court reporting. Students of this course have special advantage in court reporting. They are required to go into the Law Department and report the cases in the Moot Courts.

4. *Typewriting.*—The recognized standard machines are used for instruction and use of students. The instruction includes a thorough drill in finger exercises, in the mechanism of the different machines and in taking proper care of them and in adjusting any derangement in the mechanism. The instruction includes also the writing of letters, legal papers, law briefs, specifications, affidavits, testimony and tabulating. The use of the Neostyle Duplicator, the Mimeograph and other duplicating apparatus, is taught.

5. *Penmanship.*—The course of study is systematically arranged; both slant and vertical writing are taught. The systems have been produced after many years of experience and observation; they are free from all intricate and unmeaning analysis. The course embraces vertical and slant writing, Business, Ornamental Writing, Pen Drawing, Engrossing, Old English and German Lettering, Stipple Work, India Ink Shading, etc.

SCHOOLS OF MILITARY INSTRUCTION AND PHYSICAL TRAINING.

Physical Training School.

JAMES W. HARTIGAN, M. D., *Instructor.*

At a meeting of the Board of Regents in July, 1893, this school was organized. All students entering the preparatory or freshman classes are required to enroll in this school for two years. The object of the school is to combine military instruction with physical training in such a way as to beget the habit and desire in the student to be prompt, obedient and efficient in the discharge of his duties, to confine athletics within reasonable bounds, and to direct physical education in more healthy channels, that it may act as an adjunct to mental development.

Many young men when entering college come from an active life and lapse into the sedentary habits of the student, or being suddenly released from the restraints of home, devote too much time to athletics. This school is intended to correct both evils. The time devoted to it is five hours per week throughout the year, and the instruction is as set forth below:

	Fall Term.	*Winter Term.*	*Spring Term*
Military School:	3 hours.	3 hours.	4 hours.
School of Physical Training:	1 hour.	1 hour.	1 hour.

All male students entering the preparatory or freshman classes are required to take this course for two years.

The department has a well equipped gymnasium with plunge and shower baths attached. It has a limited number of good boats, and it is hoped that in a few years boating will be one of the most attractive and beneficial features of this work, as the University is located on an arm of one of the most beautiful boating courses in the country.

Students taking this course will provide themselves with towels and one pair of rubber shoes. Only members of special sections will be required to procure gymnasium suits.

All students will be given a critical physical examination upon entering. An accurate record will be kept and each will be assigned the special work his exination shows him to need. The examinations will be repeated from time to time during the year so that the instruction may be intelligently and profibly directed.

The instruction here will aim not only to the preservation of health during the mental toil of a college career, but also to the correction and perfect development of the whole physical organization.

Course of Instruction.

FIRST YEAR.

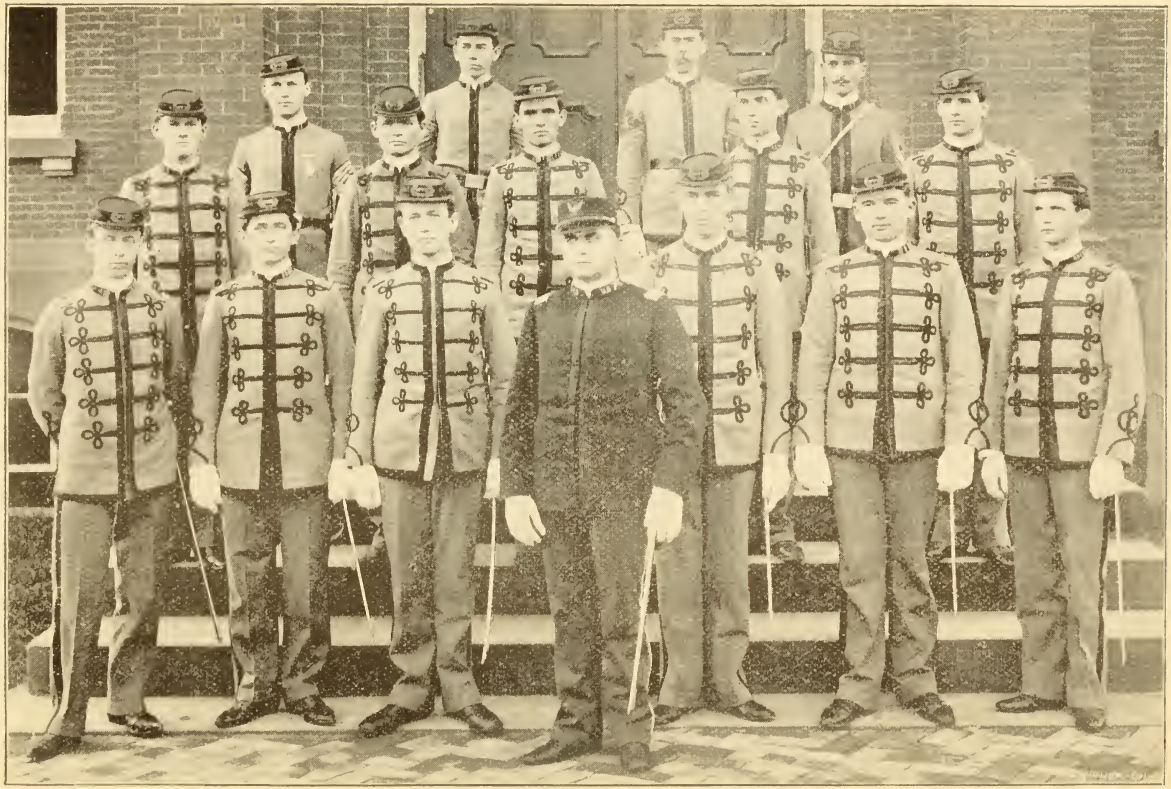
The fall term will be given to light gymnastics. The pupils will be drilled to music in the simple motions of stepping, charging, lunging, hopping, running, etc, The winter will be given to other free gymnastic movements including the various head, neck, eye, chest, waist and extremity exercises. During the spring term the time will be given to instruction in calisthenics, figure marching, running and light dumbbell exercises.

SECOND YEAR.

During t e fall term the light dumbbell exercises will be continued with exercises in vaulting, jumping and club swinging. The winter term will be devoted to club swinging, chest machine work, ladder and bar-bell exercises, and the spring term to horizontal and parallel bar work, boxing and ring exercises.

After the completion of this course, students who do not take the advanced military course will be required to take gymnasium work one hour a week during their attendance at the University.

This does not apply to professional students.



Commandant and Staff.

THE MILITARY SCHOOL.

CAPTAIN C. C. HEWITT, *19th Infantry, United States Army, Commandant of Cadets.*

The Military School is directly under charge of an officer of the United States Army specially detailed for this service. This school is inspected annua ly by an officer under the direction of the Inspector General of the army. The Inspector's report becomes a part of the records of the War Department. It is thus seen that the government takes an active interest in the military training of the youth of the country.

In the Army Register, published annually, the names of the three students from each College, who stand highest in the Military School at the last Commencement, are published. This is quite an honor, for many thousand copies of this Register are distributed throughout the country. In addition to being an honor to the cadet, it enables the government, in case of need, to select from these names such persons in each State as have had military training.

The government furnishes the University with arms and equipments, and a beral supply of ammunition for target practice. Two 3.2 inch breech-loading modern field pieces will be furnished by the government for artillery drill this year.

The training in the Military School will instill habits of order, neatness and correctness; give the cadet an erect carriage and teach him to obey and to command.

A student, to be eligible for a cadet appointment, must be beween sixteen and twenty-one years of age, and must be able to furnish the Regent with evidence of good moral character.

Each cadet must provide himself with a uniform, costing about $20.00.

Application for a cadet appointment should be made to a Regent of the University. The application should set forth the age, name and residence of the applicant, and should enclose a physician's certificate of good health.

The following are the names and addresses of the Regents:

Hon. S. F. Reed, Clarksburg.

Hon. E. P. Rucker, Welch.

Hon. W. E. Haymond, Sutton.
Hon. Chas. B. Hart, Wheeling.
Hon. J. H. Stewart, Raymond City.
Hon. Jas. F. Brown, Charleston.
Hon. Geo. F. Evans, Martinsburg.
Col. C. L. Smith, Fairmont.
Col. J. A. Robinson, President, Patterson's Depot.

Administration and Instruction.

For the purpose of administration and drill, the corps of cadets is organized as an Infantry Batallion. Cadet officers exercise command. All appointments are made after a competitive examination. A cadet successfully completing the military course will be competent to hold a commission in any military organization. Cadets are divided into sections corresponding to their military proficiency and length of service. New Cadets will be required to enter the fourth section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The course will consist of practical and theoretical instruction in military science, infantry drill regulations, artillery drill, saber exercise and fencing, physical training in the gymnasium, U. S. Army regulations, military law, guard duty, marksmanship and military signaling. The theoretical part of the course will occupy one hour per week, and the entire course will not exceed four hours per week.

Course of Instruction.

The instruction of the various sections will be as follows:

FOURTH SECTION.

Practical Instruction: (a.) Infantry drills in school of the soldier, squad, company and batallion; extended order and ceremonies. (b.) Guard duty as a sentinel. (c.) Physical training in the gymnasium.

Theoretical Instruction: (a.) Infantry Drill Regulations, paragraphs 1 to 148, and 502 to 601, inclusive. (b.) The Manual of Guard Duty except paragraphs 331 to 373, inclusive. (c.) The explanation of Cadet Regulations and General Orders, and the care of arms and accoutrements.

THIRD SECTION.

Practical Instruction: (a.) Infantry drills same as fourth section except in school of soldiers. (b.) Artillery dismounted battery and saber drills. (c.) Guard duty as sentinels and non-commissioned officers. (d.) Physical training in the gymnasium.

Theoretical Instruction: (a.) Infantry Drill Regulations, paragraphs 249 to 367,

602 to 620, and 663 to 769 inclusive (b.) Reed's Artillery Tactics, paragraphs 341 to 460 inclusive.

SECOND SECTION.

Practical Instruction: (a.) Infantry drills same as third section. (b.) Military signalling. (c.) Small arms firing, including the preparation of ammunition, position and aiming drills, gallery practice and range firing. (d.) Guard duty same as third section.

Theoretical Instruction: (a.) Infantry Drill Regulations, paragraphs 368 to 499; and 621 to 662 inclusive. (b.) Military signalling. (c.) Small Arms Firing Regulations. (d.) United States Army Regulations.

FIRST SECTION.

Practical Instruction: (a.) Infantry duties of grade attained. (b.) Guard duty of grade attained. (c.) Courts martial. (d.) Fencing.

Theoretical Instruction: (a.) Minor tactics, including advance and rear guards, outposts, marches, field fortifications, riot duty, etc. (b.) Military Law.

CADET CORPS.

Military Graduates and Distinguished Cadets 1895-6.

GRADUATES IN THE COURSE OF MILITARY SCIENCE AND TACTICS, JUNE 12, 1895.

1—Cadet First Lieutenant W. R. Standiford, Distinguished Cadet.
2—Cadet First Lieutenant J. M. Kunkel, Distinguished Cadet.
3—Cadet Sergeant Major Jesse B. Protzman, Distinguished Cadet.
4—Cadet First Lieutenant H. M. Leps.
5—Cadet Second Lieutenant J. G. Knutti.
6—Cadet Second Lieutenant C. F. Jolliff.
7—Cadet Ordnance Sergeant W. F. Naret.
8—Cadet Second Lieutenant B. G. Moore.
9—Cadet Second Lieutenant O. L. Haught.

DISTINGUISHED CADETS OF UNDERGRADUATE SECTIONS, JUNE 12, 1895.

Second Section.

1—Cadet Sergeant Josiah Keely, Company A.
2—Cadet First Sergeant Charles E. McCoy, Company A.
3—Cadet Sergeant Lloyd L. Friend, Company B.

Third Section.

1—Cadet Sergeant Earle A. Brooks, Company A.
2—Cadet Sergeant Harry A. Eaton, Company A.
3—Cadet Lance Corporal Hunter H. Moss, Jr., Company B.

Fourth Section.

1—Cadet Charles F Holden. Company B.
2—Cadet Benjamin F. Laughlin, Company B.
3—Cadet Frank K. Lowe, Company A.

Roster of Officers of the Corps of Cadets for the Year 1895–6.

COMMANDANT OF CADETS.

	Date of Commisson.
C C. Hewitt, Capt. 19th Infantry	June 4, 1892.

CADET MAJOR.

Della B. Kinkaid,	June 12, 1892.

STAFF.

Major James W. Hartigan, Surgeon,	September 23, 1889.
Cadet Captain T. C. Johnson, Captain of Artillery,	June 12, 1895.
Cadet First Lieutenant, J. G Knutti, Adjutant,	June 12, 1895.
Cadet Second Lieutenant, C. F. Jolliff, Quartermaster	June 12, 1895.
Cadet Second Lieutenant, C. E. McCoy, Signal Officer,	September 18, 1895.

CADET CAPTAINS.

E. M. Pearcy, Company A	June 13, 1894.
W. R. Standiford, Company B	June 12, 1895.

CADET FIRST LIEUTENANTS.

H. M. Leps, Company A	June 13, 1894.
J. M. Kunkel, Company B	June 13, 1894.

CADET SECOND LIEUTENANTS.

B. G. Moore, Company A	June 13, 1894.
W. F. Naret, Company B,	June 12, 1895.

CADET NON-COMMISSIONED STAFF.

H. A. Eaton, Sergeant Major,	September 24, 1895.
J. M. Orr, Quartermaster Sergeant,	September 24, 1895.
E. A. Brooks, Ordnance Sergeant,	June 12, 1895.
D. Utt, Principal Musician,	January 28, 1895.

CADET FIRST SERGEANTS.

Josiah Keely, Company A	June 13, 1894.
Walter H. South, Company B	June 13, 1894.

CADET SERGEANTS.

L. L. Friend, Conpany B	January 28, 1895.
W. C. Kilmer, Company A	June 12, 1895.
W. D. R. Annan, Company B	June 12, 1895.
B. F. Scott, Company A	June 12, 1895.

E. L. Naret, Company A.....June 12, 1895.
B. F. Laughlin, Company B.....September 18, 1895.
C. A. Osborn, Company A.....September 24, 1895
W. L. Robe, Company B.....September 24, 1895

CADET CORPORALS.

C. E. Graham, Company A.....June 12, 1895.
Paul McCoy, Company B.....June 12, 1895.
R. C. Yoho, Company A.....June 12, 1895.
B. S. Thomas, Company A.....June 12 1895.
G. R. Krebs, Company A.....September 18, 1895.
F. H. Babb, Company B.....September 18, 1895.
W. M. Chapman, Company B.....November 26, 1895.
E. F. Goodwin, Company B.....March 13, 1896.
R. W. Heavner, Company A.....March 13, 1896.
G. H. F. Holy, Company B.....March 31, 1896.

Enrollment of the Military Department, 1895-6.

CADET GRADUATES—10.

Order of Rank.	*Year of Enrollment.*
1—D. B. Kincaid, Cadet Major.	1890
2—E. M. Pearcy, Cadet Captain	1890
3—T. C. Johnson, Cadet Captain	1890
4—W. R. Standiford, Cadet Captain	1891
5—H. M. Leps, First Lieutenant	1891
6—J. M. Kunkel, First Lieutenant	1891
7—J. G. Knutti, First Lieutenant	1891
8—B. G. Moore, Second Lieutenant	1891
9—C. F. Jolliff, Second Lieutenant	1892
10—W. F. Naret, Second Lieutenant	1892

FIRST SECTION—7.

1—J. Keely, Cadet First Sergeant	1892
2—C. E. McCoy, Cadet Second Lieutenant	1892
3—L. L. Friend, Cadet Sergeant	1892
4—H. C. Hess, Cadet Sergeant	1892
5—E. L. Naret, Cadet Sergeant	1892
6—J. M. Orr, Cadet Sergeant	1892
7—W. H. South, Cadet First Sergeant	1892

SECOND SECTION—6.

1—E. A. Brooks, Cadet Sergeant	1893
2—H. A. Eaton, Cadet Sergeant	1893
3—B. F. Scott, Cadet Sergeant	1893
4—W. C. Kilmer, Cadet Sergeant	1893
5—D. Utt, Cadet Principal Musician	1893
6—W. D. R. Annan, Cadet Sergeant	1893

THIRD SECTION—34.

1—B. F. Laughlin, Cadet Sergeant 1894
2—R. C. Yoho, Cadet Corporal 1894
3—P. McCoy, Cadet Corporal 1894
4—G. E Granim Cadet Corporal 1894
5—W. L. Robe, Cadet Sergeant 1894
6—G. R. Krebs, Cadet Corporal 1894
7—E. F. Goodwin, Cadet Corporal 1894
8—C. A. Osborn, Cadet Sergeant 1894
9—W. E. Lively, Cadet Corporal 1894
10—F. H. Babb, Cadet Corporal 1894
11—R. W. Heavner, Cadet Corporal 1894
12—B. F. Wood 1894
13—W. M. Chapman, Cadet Corporal 1894
14—G. H. F. Holy, Cadet Corporal 1894
15—H. A. St. Clair 1894
16—B. S. Thomas, Cadet Corporal 1894
17—J. V. Langfitt 1894
18—I. Mansbach 1894
19—C. E. Nethken 1895
20—F. E. Clark 1894
21—P. Konrad 1894
22—C. H. Core 1894
23—J. R. Moreland 1894
24—J. C. Frazier 1894
25—E. Cooper 1894
26—D. M Cochran 1894
27—E. M. Dille 1894
28—J. C. Rane 1894
29—F. J. St. Clair 1894
30—R. H Wilson 1894
31—W. S. John 1894
32—R. C Caldwell 1894
33—H. L Smyth 1894
34—S. W. Hogsett 1895

FOURTH SECTION—78.

1—J. W. Grose 1895
2—P. E. Green 1895
3—S. Frankenberger 1895
4—R. A. Farland 1895
5—H. M. Gore 1895
6—J. E. Martin 1895
7—A. W. McDonald 1895
8—Henry Booth 1895
9—George Williams 1895
10.—L. M. Stone 1895
11—C. P. Davidson 4895
12—C. W Waddell 1895
13—R. L. Gregg 1895
14—G. W. Hogg 1895
15—C. R. Weirich 1895
16—P. E. Elliott 1895

17—L. A. Yeager 1895
18—J. O. Smith 1895
19—A. L. Sawtelle 1865
20—C. H. Trippett 1895
21—H. K. Drane 1895
22—E. Jones 1895
23—W. Lowe 1895
24—H. B. Jamison 1895
25—W. T. McDonald 1895
26—J. B. Scott 1895
27—C. N. McWhorter 1895
28—D. H. P. Parrish 1895
29—E. G. Blume 1895
30—W. B. Catlett 1895
31—J. C. Freeman 1895
32—H. F. Armstrong 1895
33—H. S. Armstrong 1895
34—H. W. Frazier 1895
35—J. C. Thomson 1895
36—C. P. Hitchens 1895
37—E. W. Williams 1895
38—D. C. Smith 1895
39—W. E. West 1895
40—A. N. Thomson 1895
41—J. K. Thomson 1895
42—R. C. Crockett 1895
43—J. E. Pennybacker 1895
44—F. D. Mitchell 1895
45—W. S. Arnold 1895
46—G. E. Anderson, volunteer 1895
47—F. M. Lardin, volunteer 1895
48—C. L. Kirk, volunteer 1895
49—W. F. Alexander 1895
50—H. R. Crossland, volunteer 1895
51—J. C. Long, volunteer 1855
52—W. F. Holland 1895
53—B. F. Whitescarver 1895
54—L. O. Logan 1895
55—D. E. Miller 1895
56—H. Maxwell 1895
57—W. J. Lee 1895
58—E. H. Cameron 1895
59—H. H. Ireland 1895
60—J. P. Lazier 1895
61—R. M. Douthat 1895
62—J. E. Gray 1895
63—L. Judy, volunteer 1895
64—H. A. Doan 1893
65—W. Hatfield 1896
66—W. C. Dann 1896
67—J. Keller 1896
68—P. D. Yeager 1896
69—H. F. Steele 1896
70—J. G. Thomas 1896
71—G. D. McNeill 1896
72—J. J. Abersold 1896

72—H. P. Reitz 1896
74—J. L. Daniels 1896
75—R. K. Robinson 1896
76—W. G. Davis 1896
77—G. Neely 1896
78—D. C. McMechen 1896
Total, ... 135.

SUMMARIES.

Preparatory School.

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Academic College.

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2nd English 29
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6th English .....
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MATHEMATICS.

1st Mathematics	37
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3rd Mathematics	3
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Junior	45
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COMMERCIAL SCHOOL.

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SCHOOL OF PHYSICAL TRAINING.

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New York	1
Kentucky	1
Roumania	1—398

BY SEX.

Males	363
Females	35—398

DEGREES CONFERRED 1894--5.

In Course.

BACHELOR OF ARTS.

C. E. Carrigan,
W. B. Cutright,
T. L. Davies,
M. E. Gorman,
W. J. Holden,
G. H. A. Kunst,
U. S. G. Kendall,
C. N. Ridgway,
J. F. Strader,
J. B. Protzman.

BACHELOR OF SCIENCE.

S S. Jacob,
P. B. Martin,
Anna B. White,
Stella S. White.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

F. M. Lavelle,
R. L. Morris,
S. C. Stathers.

BACHELOR OF LAWS.

R. E. L. Allen,
L. H. Burnett,
L. D. Beall,
F. C. Cox,
R. L. Clarke,
S. R. Davis,
W. Grablachoff,
L. Greynolds,
W. J. Holden,
A. J. Holden,
A. D. Ireland,
L. M. Jaco,
H. M. Lockridge,
L. Masas,
G. W. McCauley,
J. T. McDonald,
C. S. Morrison,
Agnes J. Morrison,
W. E. Patterson,
C. J. Poe,
D. C. Reay,
H. Shaw,
E. J. Somerville,
B. F. Sterling,
W. L. Talbott,
J. M. Turner,
J. T. Wilson,
G. B. Scott.

SENIOR CLASSES IN COURSE—1895-6.

BACHELOR OF ARTS.

Alderson, Jr., George
Haught, T. W.
Keely, Josiah
Longanecker J C.
Kinkaid, D B.
Reynolds, Miss Mabel Curry
Pearcy, E. M.
Sanders, J. C.

BACHELOR OF SCIENCE.

McBee, P. C.
Kunkel, J M.

BACHELOR OF ARTS IN LAW.

Arnold, Jackson

BACHELOR OF SCIENCE IN LAW.

Baker, W. E.

BACHELOR OF SCIENCE IN AGRICULTURE.

Johnson, T. C.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

Rader, A. F.

MECHANICAL ENGINEERING.

Hall, B. H.

BACHELOR OF LAWS.

Anderson, Luther Colfax, A. B.
Baker, J. M.
Bambrick, George L.
Barlow, J. H S.
Blair, S. Brice
Brady, Irving L.
Caldwell, William Goshorn, A. B.
Campbell, Oscar A.
Carter, Olin
Casto, David Clate
Cramer, C. W.
Eagle, E. C.
Ford, George M., A. B.
Fortney, Loraine
Gore, Claud Webster, A. B.
Hall, Wilburn W.
Harding, Clare W.
Hess, W. M.
Hickel, T. J.
Hott, George W.
Hoge, Patrick M.
Jolliff, Clarence Frank
Judy, E. L.
Kinkaid, D. B., A. B.
Lemen, John O.
McClure, Harry B.
Moss, Jr., Hunter Holmes.
Nethken, C. E.
Noll, Allen Billmyer
Pierce, Arthur Cary
Randolph, Ernest
Reynolds, E. Bunker
Rowan, Frank A.
Rush, Frank P.
Smith, John Newton
Stallings, A. Robert
Stevens, Judson Lowell
Stewart, Edgar
Stiles, Thomas Shriver
Strader, J. F., A. B.
Wade, J. M. S.
White, Buchannon
Wolfhope, Frank A.
Wysong, William Sydney
Yeager, J. W.

REGISTER 1895-6.

Roll of Preparatory Students.

Name.	*Postoffice.*	*County*
Alexander, William Frank	Mannington	Marion.
Alexander, Clyde	Morgantown	Monongalia.
Armstrong, Harry S	Jackson	Jackson.
Armstrong, H. F.	Jackson	Jackson.
Atkinson, Jr., George W.	Wheeling	Ohio.
Barrickman, Van Ara,	Cassville	Monongalia.
Beall, Clarence Hough	Morgantown	Monongalia
Beall, Charley Clediss	Morgantown	Monongalia
Benn, Richard Thomas	Alleghany,	Pennsylvania.
Bircher, G. C.	Randall	Monongalia.
Blume, E. G.	Fayette	Fayette.
Booth, Henry	Thacker	Mingo.
Bowman, Frank L.	Masontown	Pennsylvania.
Briggs, James William	Wellsburg	Brooke.
Brown, J. M. G.	Morgantown	Monongalia.
Brown Carl L.	Reedy	Roane.
Caldwell, R. C.	Parkersburg,	Wood.
Cameron, Earl H.	Morgantown	Monongalia.
Catlett, William Brice	Berkeley Springs	Morgan.
Chapman, William M.	East Bank	Kanawha.
Cochran, D. Melville	Morgantown	Monongalia.
Colebank, Ora O.	Stewartstown	Monongalia.
Cooper, Earl	Washington	Wood.
Core, C. H.	Pedlar	Monongalia.
Cox, Lawrence Morgan	Morgantown	Monongalia.
Crockett, R. C.	Crump's Bottom	Summers.
Dann, Wiliam C	Elkins	Randolph.
Daniels, John Luther	Gerardstown	Berkeley.
Day, Clay	Mouth of Seneca	Pendleton.
Dent, S. M.	Duke	Monongalia.
Dille, Elisha Merrill	Morgantown	Monongalia
Doan, Harry A	St. Mary's	Pleasants.
Douthat, Robert M	Morgantown	Monongalia.
Duncan, S. E	Oak Hill	Fayette.
Elliott, Percy E.	Charles Town	Jefferson
Evans, James	Morgantown	Monongalia.
Farland, Richard A	Clarksburg	Harrison.
Finnell, Harry W.	Morgantown	Monongalia.
Frankenberger, Samuel	Charleston	Kanawha.
Freeman, J. C.	Clarksburg	Harrison.
Garrison, H. A.	Morgantown	Monongalia.
Garrison, James A.	Jollytown	Pennsylvania.
Gore, Howard Mason	Clarksburg	Harrison.
Grose, J. W.	Charleston	Kanawha.
Hackney, John M	Morgantown	Monongalia.
Harner, J. C.	Morgantown	Monongalia.
Harper, Jerome	Macksville	Pendleton.
Harvey, John Speed	Morgantown	Monongalia.
Hatfield, Wayne	Thacker	Mingo.
Hayes, Russell A	Morgantown	Monongalia.
Hendrickson, L. S.	Seymoursville	Grant.
Hennen, Ray Vernon	St. Cloud	Monongalia.
Hiehle, Ernest	Parkersburg	Wood.
Holland, W. F.	Morgantown	Monongalia.
Hogsett, S. W.	Hogsett	Mason.
Hott, Jr., David	Martinsburg	Berkeley.
Howe, James V.	Morgantown	Monongalia.
Ireland, Humbert	Morgantown	Monongalia.
Isaacs, Julius	New York City	New York.
Jarvis, Cecil C	Clarksburg	Harrison.
John, William S	Rosedale	Pennsylvania.

Name.	Postoffice.	County.
Sawtelle, Archie Leroy	Wheeling	Ohio.
Sedwick, Maude	Morgantown	Monongalia.
Sedwick, Mamie E	Morgantown	Monongalia.
Semans, Blanche	Morgantown	Monongalia.
Smith, D. V	Upland	Mason.
Smyth, Harry Lee	Maidsville	Monongalia.
Shaw, Harry	Colfax	Marion.
Shuman, Clinton P	Ceredo	Wayne.
South, Winnie Orienta	Morgantown	Monongalia.
South, Walter Haines	Morgantown	Monongalia.
Standiford, William Russell	Elm Grove	Ohio.
Stevens, William W	Alderson	Greenbrier.
Stocking, George B	Sistersville	Tyler.
Stoneking, James Lindsay	Morgantown	Monongalia.
Sutphin, Nannie May	Lexington	Kentucky.
Swartzwelder, A. L	Pittsburg	Pennsylvania.
Swisher, H. L	South Branch	Hampshire.
Thompson, Harley	Laurel Point	Monongalia.
Thomson, A. N	Parkersburg	Wood.
Tompkins, Thomas S	Charleston	Kanawha.
Trippett, Clyde H	Wheeling	Ohio.
Utt, Orna Ellen	Morgantown	Monongalia.
Utt, Des Moines	Morgantown	Monongalia.
Van Camp, Miss Gilla	Morgantown	Monongalia.
Van Gilder, Lida Eada	Morgantown	Monongalia.
Venable, William Walton	Charleston	Kanawha.
Wade Ada B	Morgantown	Monongalia.
Wallace, John	Wheeling	Ohio.
Wells, Elta B	Morgantown	Monongalia.
White, Henry M	Camden	Lewis.
White, Bennett S	Morgantown	Monongalia.
Whitescarver, Edward M	Pruntytown	Taylor.
Whitescarver, Jr., J. S	Pruntytown	Taylor.
Whitescarver, Miss L. L	Pruntytown	Taylor.
Wilson, Richard H	Viola	Marshall.
Wood, Fred B	Wheeling	Ohio.
Wood, Lucy Berkshire	Morgantown	Monongalia.
Yoho, Robert C	Rosby's Rock	Marshall.
Zearley, Gertrude	Morgantown	Monongalia.

REGISTER 1895-6.

Roll of Law Students.

Anderson, Luther Colfax, A. B	Walkersville	Lewis.
Arnold, Jackson* (A. B. in Law.)	Arnold	Lewis.
Artrip, J. B	Ft Gay	Wayne.
Baker, J. M	Sandyville	Jackson.
Baker, William E.* (B. S. in Law)	Beverly	Randolph.
Bambrick, George L	New Cumberland	Hancock.
Barlow, J. H. S	Kingwood	Preston.
Bennett, John Brannon	Weston	Lewis.
Blair, S. Brice	Pleasant Valley	Marshall.
Blaney, John Irvin	Good Intent	Pennsylvania.
Bills, Robert E	Calcutta	Pleasants.
Brady, Irving L	Morgantown	Monongalia.
Burdett, Clarence Rand	Charleston	Kanawha.
Caldwell, William Goshorn, Ph. B	Wheeling	Ohio.
Campbell, Oscar A	Morgantown	Monongalia.
Carter, Olin	Elk City	Barbour.
Casto, David Clate	Jackson C. H	Jackson.

* A star indicates a course of four years.

Name.	Postoffice.	County.
Cramer, C. W	Piedmont	Mineral.
Deem, H. N	Saulsbury	Wood.
Dillie, Thomas Ray	Morgantown	Monongalia.
Douthat, Luther L	Morgantown	Monongalia.
Drane, Harry K.* (A. B. in Law)	Piedmont	Mineral.
Eagle, E. C	Lobelia	Pocahontas.
Fickeisen, A. G	Wellsburg	Brooke.
Ford George M, A. B	Grafton	Taylor.
Fortney, Lorraine	Independence	Preston.
Friedman, Leon	Braddock	Pennsylvania.
Goodwin, Elmer E.* (A. B. in Law.)	Bridgeport	Harrison.
Gore, Claud Webster, A. B	Clarksburg	Harrison.
Hall, Wilburn W	Madison	Boone.
Harding, Clare W	Beverly	Randolph.
Harman, Simon P	Harman	Randolph.
Harman, Martin C	Harman	Randolph
Harrison, Taney	Falling Springs	Greenbrier.
Heavner, Ralph W	Buckhannon	Upshur,
Heck, P S	Rivesville	Marion.
Heironimus, Robert D	Davis	Tucker,
Hess, W M	Bingamon	Marion.
Hickel, T. J	Richardson	Calhoun.
Hickman, Charles Taylor	Dunkard	Pennsylvania
Hill, Walter	Beverly	Randolph.
Hitt, George W	Millville	Jefferson.
Hoge, Patrick M	Fairmont	Marion.
Jodliff, Clarence Frank	Uniontown	Wetzel
Johnson, Geo. W	Martinsburg	Berkeley.
Judy, E. L	Pansy	Grant.
Keifer, Edwin O *(A. B. in Law)	Paden's Valley	Wetzel.
Kenney, Amos E	Arnoldsburg	Calhoun.
Keys, Thomas P	Keyser	Mineral.
Kinkaid, D. B, A. B	Knottsville	Taylor.
Law, James E	Salem	Harrison.
Leech, John L	Palatine	Marion.
Lemen, John O	Martinsburg	Berkeley.
McClure, Harry B	Braddock	Pennsylvania.
McCoy, Paul *(A. B. in Law)	Fairmont	Marion.
Morgan, Ephraim F	Forksburg	Marion.
Moss, Jr., Hunter Holmes	Parkersburg	Wood
Nethken, C. E	Elk Garden	Mineral.
Noll, Allen Bilinger	Martinsburg	Berkeley.
Ogden, Marshall W	Prospect Valley	Harrison.
Pastorius, Thomas	Morgantown	Monongalia.
Pierce, Arthur Cary	Shepherdstown	Jefferson.
Randolph, Earnest, A. B	Salem	Harrison.
Reynolds, E. Bunker	Keyser	Mineral.
Rice, Jr., Benjamin F	Clarksburg	Harrison.
Rowan, Frank A	Beverly	Randolph.
Rush, Frank P	Uniontown	Pennsylvania.
Sheerin, James	Morgantown	Monongalia.
Smith, Harvey Faris, *(A. B. in Law.)	Clarksburg	Harrison.
Smith, John Newton	Morgantown	Monongalia.
Speer, John Randolph	Elizabeth	Pennsylvania.
Staggers, Harman C	Martinsburg	Berkeley.
Stallings, A. Robert	Medley	Grant.
Stanley, Amos O	Bunness	Marion.
Startzman, L. William	Carmel	Preston.
Stevens, Judson Lowell	Winfield	Putnam.
Stewart, Edgar	Martinsburg	Berkeley.
Stiles, Thomas Shriver	Cross Roads	Monongalia.
Stout, W. Frank	Bridgeport	Harrison.
Strader, J. F., A. B.	Beverly	Randolph.
Taylor, Lee Roy *(A. B in Law.)	Wadestown	Monongalia.
Wade, James M. S	Parkersburg	Wood.
White, Buchannon	Weston	Lewis.
Wimer, E. E	Crawford	Lewis.
Wolfhope, Frank A	New Baltimore	Pennsylvania.
Womelsdorf, Isaac B	Womelsdorf	Randolph.
Wysong, William Sydney	Ronceverte	Greenbrier.
Yeager, J. W	Marlinton	Pocahontas.
Yost, Fielding Harris	Amos	Marion.

*A star indicates a course of four years.

Name	Postoffice.	County.
Jones, Elbert	Rivesville,	Marion.
Judy, Lafayette	Upper Tract,	Pendleton.
Keller, Jr., Joe	Parkersburg,	Wood.
Kirk, Charles L.	Sharpsburg,	Pennsylvania.
Kunkel, J. H.	Morgantown,	Monongalia
Lardin, Frank M	Masontown,	Pennsylvania.
Lazier, James P	Morgantown,	Monongalia.
Lazier, Jr., Henry B	Morgantown,	Monongalia.
Lee, William James	Egston,	Monongalia.
Lively, Jr., William E	Weston,	Lewis.
Logan, Edgar O.	Parkersburg,	Wood.
Long, James Curry	New Haven,	Pennsylvania.
Lowe, Walter L.	Shinnston	Harrison.
Lowe, Scott C.	Eldora,	Marion
Lucas, Arthur M	Morgantown,	Monongalia.
Mahaney, Jr., Lloyd	Uniontown,	Pennsylvania.
Mansbach, Isaac	Morgantown,	Monongalia.
Marshall, J. Ligon	Mingo,	Randolph.
Martin, Joseph A	Cassville,	Monongalia.
Martin, Clarence Eugene	Martinsburg,	Berkeley.
Matthews, Harry J.	Mannington,	Marion.
Maust, F. L	Morgantown,	Monongalia.
Maxwell, Haymond	Clarksburg,	Harrison.
McDonald, W. T.	Shenandoah Junction	Jefferson.
McMechen, D. C.	Washington	Wood.
McNeely, J. D.	Madison,	Boone.
McNeill, George D.	Buckeye,	Pocahontas.
McWhorter, Charles Nathan	Lewisburg,	Greenbrier.
Means, Noble Beverage	Hedgesville,	Berkeley.
Miller, Dwight Edmund	Morgantown,	Monongalia.
Miller, Archie H.	Morgantown,	Monongalia.
Miller, Jacob F.	Old Frame,	Pennsylvania.
Mitchell, Fred Davidson	Belleville	Wood.
Morford, Oliver Perry	Pedlar	Monongalia.
Moreland, James Rogers	Morgantown	Monongalia
Moreland, Henry Lazier	Morgantown	Monongalia.
Neely, George	Lightburn	Lewis
Newcomer, Frank C	High House.	Pennsylvania.
Osborn, C. Alex.	Clarksburg	Harrison.
Parrish, David Henry Putney	Elmo	Fayette
Parsons, G. A	Keyser	Mineral.
Pennybacker, James Edmund	Franklin	Pendleton.
Ransom, Lyle M	Harper's Ferry	Jefferson.
Read, Robert Gwynn	Elkins.	Randolph.
Read, Semmes	Elkins	Randolph.
Reitz, Henry P.	Petroleum	Ritchie
Reynolds, Boyce Weston	Morgantown	Monongalia.
Robe, Wilbur L.	Morgantown	Monongalia.
Robinson, R. K.	Shanghai	Berkeley.
Rogers, Ralph	Morgantown	Monongalia.
Sanders, Charles C.	Maidsville	Monongalia.
Scott, Joseph B.	Lewisburg	Greenbrier.
Scott, B. F.	Terra Alta	Preston.
Six, W. L.	Wadestown	Monongalia.
Sheerin, George	Morgantown	Monongalia.
Shisler, John H.	Morgantown	Monongalia.
Shuttleworth, Jr., B. F.	Clarksburg	Harrison.
Smith, James O	Marlington	Pocahontas.
Smith, Da Costa	Weston	Lewis.
Speer, L. Springer	Greensburg	Pennsylvania.
St. Clair, Harry A	Stewartstown	Monongalia.
St. Clair, Franklin J.	Morgantown	Monongalia.
Steele, Harry George.	Keystone	McDowell.
Stone, Lowell Mason	Belleville.	Wood.
Thomas, James Garfield	Algoma,	McDowell.
Thomas, Benjamin S.	St. Albans,	Kanawha.
Thompson, James Cal	Madison,	Boone.
Thomson, James K.	Parkersburg,	Wood.
Trippett, Jesse Fenton	Morgantown,	Monongalia.
Turner, Jr., Charles H	Parkersburg,	Wood.
Waddell, Charles W.	Brandonville,	Preston.
Weirich, Colin Reed	Wellsburg,	Brooke.
Werneberg, Howard G.	Pittsburg,	Pennsylvania.
West, William Earl	Sistersville,	Tyler.

Name,	Postoffice,	County
Whitney, Benjamin F.	Walton,	Roane.
Whitescarver, B. Frank	Prunty Town,	Taylor.
Whitescarver, Charles C.	Prunty Town,	Taylor.
Williams, George	Thacker,	Mingo.
Williams, Earl W.	West Grafton,	Taylor.
Willey, Guy A.	Morgantown,	Monongalia.
Willey, Chauncey D.	Morgantown,	Monongalia.
Wood, George W.	Morgantown,	Monongalia.
Yeager, Louis A.	Marlinton,	Pocahontas.
Yeager, Paris D.	Marlinton,	Pocahontas.

REGISTER 1895-6.

Roll of College Students.

Abersol', Jacob J.	New Martinsville	Wetzel.
Alderson, Jr., George	Alderson	Monroe.
Anderson, George Edward	Latrobe	Pennsylvania.
Annan, W. D. R.	Newburg	Preston.
Armstrong, W. Lee	Sutton	Braxton.
Arnett Lonna D.	Opekiska	Monongalia.
Arnold, Walter S.	Harmonsville	Mineral.
Babb, Francis H.	Martin	Grant.
Bair, C. E.	Mendon	Pennsylvania.
Barard, S. E.	Salt Sulphur Springs	Monroe.
Barb, Clide	Morgantown	Monongalia.
Barnes, Isaac Allen	Morgantown	Monongalia.
Beall, J. Tipping	Jacob Bridge	Harrison.
Beck, Jr., Noah W.	Wheeling	Ohio.
Bennett, George	Morgantown	Monongalia.
Berghardt, Effie R. C.	Morgantown	Monongalia.
Brand, Willa Nowella	Morgantown	Monongalia.
Brooks, Earle Amos	French Creek	Upshur.
Brown, Maud	Kingwood	Preston.
Bruner, William J.	Wheeling	Ohio.
Burchinal, Frank M.	Fort Martin	Pennsylvania.
Cameron, Victor Vernon	Morgantown	Monongalia.
Casto, Parley C.	Buckhannon	Upshur.
Casto, D. Clarence	Rockport	Wood.
Clark, Friend E.	New Martinsville	Wetzel.
Clemens, W. G.	Dansville	Harrison.
Cochran, Charles S.	Morgantown	Monongalia.
Cole, Harry O.	Silver Pines	Mason.
Crossland, Howard R.	New Haven	Pennsylvania.
Davidson, Charles P.	Flemington	Taylor.
Davis, Fred Arthur	Morgantown	Monongalia.
Davis, Willis G.	New Milton	Doddridge.
Deffenbaugh, Walter S.	Smithfield	Pennsylvania.
Dering, Grace Enz	Morgantown	Monongalia.
Dorsey, Luther Thornton	Morgantown	Monongalia.
Eaton, Harry Anthony	Charleston	Kanawha.
Elliott, Charles S.	Morgantown	Monongalia.
Faulkner, Frank B.	Albright	Preston.
Feamster, R. K.	Lewisburg	Greenbrier.
Frazer, Hugh W.	Martinsburg	Berkeley.
Frazier, J. Clayton	Frazier's Bottom	Putnam.
Friend, Lloyd Lowndes	Morgantown	Monongalia.
Frum, Floyd N.	Bridgeport	Harrison.
Garlow, Charles Lee	Maidville	Monongalia.
Geobart, Frank E.	Latrobe	Pennsylvania.
Gramme, George E.	Grafton	Taylor.
Grant, Dale	Morgantown	Monongalia.
Gray, J. Edgar	Morgantown	Monongalia.
Green, Paul	Wheeling	Ohio.
Gregg, Robert L.	Silane	Mason.
Gutzu, Victor	Bucharest	Roumania.

Name.	Postoffice.	County
Hall, Bruce H.	Fairmont	Marion.
Hall, Hal	Fairmont	Marion.
Hatfield, George L.	Uniontown	Pennsylvania.
Haught, Thomas W.	Doddridge	Tyler.
Hayes, Perry Ray	Morgantown	Monongalia.
Henry, W. H.	Laurel Point	Monongalia.
Hitchens, Charles P.	Morgantown	Monongalia.
Hood, Minnie B.	Hood	Monongalia
How, G. H. F.	Grafton	Taylor.
Hull, James W.	Capon Bridge	Hampshire.
Hogg, George William	Wellsburg	Brooke.
Hugus, John W.	Wheeling	Ohio.
Ice, Jr., George William	Philippi	Barbour.
Lee, R. Dumont	Laurel Point	Monongalia.
Ireland, A. J. Wilson	Morgantown	Monongalia.
Ireland, Kate	Morgantown	Monongalia.
Jaco, Lin M.	Morgantown	Monongalia.
Jamison, Harry B.	Wheeling	Ohio.
Jamison, Mary Gillian	Morgantown	Monongalia.
Johnson, Thomas C.	Long Reach	Tyler.
Johnson, Laura Cale	Long Reach	Tyler.
Jones, Hannah Louise	Morgantown	Monongalia.
Jones, Bertie Cook	Morgantown	Monongalia.
Keely, Josiah	Charleston	Kanawha.
Kilmer, Myrle Carter	Martinsburg	Berkeley.
Knutti, John G.	Arpena	Randolph.
Knox, Roy L.	Uniontown	Pennsylvania.
Konrad, Philip	New Martinsville	Wetzel.
Kobb, C. R.	New Martinsville	Wetzel.
Kunkel, Justin M.	Morgantown	Monongalia.
Kunkel, J. H.	Morgantown	Monongalia.
Kunkel, Josephine M.	Morgantown	Monongalia.
Lafferty, James Valentine	Lake Mills	Doddridge.
Laugheed, Byron Maison	Morgantown	Monongalia.
Laughlin, B. Frank	Grafton	Taylor.
Law, A. S.	Clarksburg	Harrison.
Lemley, E. P.	Cassville	Monongalia.
Lens, Henry M.	Morgantown	Monongalia.
Lewellen, L.	Duke	Monongalia.
Lenzenecker, J. C.	Morgantown	Monongalia.
Lowther, C. Forest	New Martinsville	Wetzel
Madigan, Mary G.	Morgantown	Monongalia.
Maligan, Noah Beall	Morgantown	Monongalia.
Maxwell, Claudius Wilson	Parsons	Tucker.
Mayers, George M.	Fairmont	Marion.
McBee, Perry C.	Halleck	Monongalia.
McCoy, Charles E.	Buffalo	Putnam.
McDonald, Angus W.	Shenandoah Junction	Jefferson.
McLane, Joseph A.	Morgantown	Monongalia.
McVickers, Alberta Clane	Morgantown	Monongalia.
McWhorter, J. Scott	Buckhannon	Upshur.
Moore, Frederic	Belington	Barbour.
Moore, E. G.	Proctor	Wetzel.
Moreland, Eleanor Brown	Morgantown	Monongalia.
Naret, Mary R.	Buffalo	Putnam
Naret, William Frazier	Buffalo	Putnam.
Naret, Edward L.	Buffalo	Putnam.
Neliv, Henry M.	Parkersburg	Wood.
Nelson, J. Frank	Capon Bridge	Hampshire.
Ocheltree, C. H.	Morgantown	Monongalia.
Orr, James Morgan	Kingwood	Preston.
Pearcy, Everett M.	Normantown	Gilmer.
Post, Felix	Lightburn	Lewis.
Pratt, Rachel Evelyn	Wheeling	Ohio.
Pratzman, Blanche	Morgantown	Monongalia.
Rader, Arch. F.	Enon	Nicholas.
Rase, John C.	Morgantown	Monongalia.
Reynolds, Mabel Curry	Morgantown	Monongalia.
Reynolds, Ethel Toy	Morgantown	Monongalia.
Robb, Lewis J.	New Cumberland	Hancock.
Robe, Wilbur L.	Morgantown	Monongalia.
Sample, C. W.	Morgantown	Monongalia.
Sanders, James Clark	Maidsville	Monongalia.
Sanders, Mary Virginia	Maidsville	Monongalia.

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Wheeling, W. Va.

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F. C. COX..... Secretary.

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H. L. CASWELL.....President.
JOHN T. COOPER.....Secretary.

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MISS LILLIAN HACKNEY.....Secretary.

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JAMES F. BROWN.....President.
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Annual.

The University issues its first Book Annual this year. It is a handsome volume and makes a beautiful souvenir.

Copies can be had by writing to Professor W. B. Cutright, Morgantown, W. Va.

ALUMNI.

Alumni Association.

OFFICERS FOR 1895-'96.

Hon. J. H. Stewart.....President.
Robt. A. Armstrong.....Sec'y and Treas.

GRADUATES.

1870.

Hon. M. H. Dent, A. M., Grafton, W. Va., Judge of Supreme Court of Appeals of West Virginia.

1871.

O. H. Dille, M. S., Morgantown, W. Va., farmer.
W. E. Jolliffe, A. M., Morgantown, W. Va., merchant.

1872.

John H. Drabell, A. M., Des Moines, Iowa, lawyer.
A. E. McLane, A. M., Steubenville, Ohio, merchant.
B. W. Smith, A. M., Minneapolis, Minn., lawyer.
I. C. White, A. M., Ph. D., Morgantown, W. Va., geologist.

1873.

Hon. Chas. M. Babb, A. M., Greenland, W. Va., farmer.
D. W. Border, A. M., M. D., Kearneysville, W. Va., physician.
W. L. Boughner, M. S., Palatine, W. Va., farmer.
Hon. Jas. F. Brown, A. M., Charleston, W. Va., lawyer and regent of West Virginia University.

E. T. Bullock, A. M., Parkersburg, W. Va., deceased.
John T. Harris, M. S., Washington, D. C., secretary to Senator S. B. Elkins.
Geo. P. Linch, M. S., Atchison, Kansas, lawyer.
T. B. McClure, M. S., Wayne C. H., W. Va., teacher.
Thos. H. Price, M. S., M. D., Philadelphia, Pa., physician.
W. T. Pritchard, Mannington, W. Va., [illegible]
D. B. Purinton, A. M., LL. D., Ph. D., Granville, Ohio, Pres. Denison University, author of "Christian Theism."
Hon. M. L. Temple, A. M., Oskaloosa, Iowa, member of Iowa State Legislature.
Jas. T. Waters, A. M., Charleston, W. Va., lawyer.

1874.

R. V. Chadwick, A. M., deceased.
Rev. J. S. W. Dean, A. M., S. T. B., Ph. D., D. D., pastor M. E. Church, Wayne, Nebraska.
Rev. William H. Howell, A. M., Marysville, Kansas, pastor Presbyterian Church.
Hon. T. P. Jacobs, A. M., New Martinsville, W. Va., judge Fourth Judicial Circuit.
Hon. Charles W. Lynch, A. M., Clarksburg, W. Va., [illegible] attorney.
Rev. E. E. Moran, A. M., Ironton, Ohio, pastor Presbyterian Church.
Frank Woods, A. M., Baltimore, Md., lawyer, 812 Equitable Building.

1875.

S. S. Adams, A. M., M. D., Washington, D. C., professor National Medical College.
Rev. E. H. Dolliver, A. M., B. D., Pittsburg, Pa., pastor M. E. Church.
Hon. J. P. Dolliver, A. M., Fort Dodge, Iowa, congressman from [illegible] District.
F. A. Goldsmith, B. S., Marshfield, Oregon, principal of schools.
James V. Martin, A. M., deceased.
Hon. J. J. Peterson, A. M., Huntington, W. Va., editor Herald, ex-United States Consul to Honduras.
A. L. Purinton, A. M., Nashville, Tenn., professor of Chemistry Normal College.

1876.

John C. Anderson, M. S., Los Angeles, Cal., business.
L. H. Frazier, A. M., Uniontown, Pa., lawyer.
H. D. Hubbard, M. S., deceased.
W. O. Ison, A. M., Washington, D. C., Treasury Department.
H. M. Kemp, M. S., M. D., Alexander, W. Va., physician.
Geo. S. Laidley, M. S., Charleston, W. Va., Supt. of Schools.
Jas. H. Nash, M. S., M. D., Huntington, W. Va., lawyer.
D. E. Wetzel, M. S., M. D., 1604 Arapahoe St., Denver, Colo., physician.

1877.

W. G. Brown, Jr., A. M., Kingwood, W. Va., lawyer.
C. B. Dille, A. M., LL. B., Morgantown, W. Va., lawyer.
J. H. Hawthorne, A. M., Kansas City, Mo., City Judge.
Thos. M. Hood, A. M., M. D., Weston, W. Va., physician.
D. R. Rogers, A. M., M. D., Ragan, Nebraska, physician.
E. C. Smith, M. S., Ravenswood, W. Va., bank cashier and lawyer.
Hon. H. J. Snively, A. M., North Yakima, Washington, prosecuting attorney.
John L. Steele, A. M., 431 Tenth st., N. W., Washington, D. C., with "Washington Times."
Hon. A. G. Dayton, A. M., Philippi, W. Va., member of Congress, Second district.
Jas. McM. Lee, A. M., Huntington, W. Va., superintendent of City Schools.
Rev. E. J. Marsh, A. M., Prof. University of Southern California, Los Angeles.
Hon. B. S. Morgan, A. M., Charleston, W. Va., ex-State Supt. of Schools, lawyer.
Daniel Rich, A. M., South Bend, Indiana, lawyer.

1879.

Geo. D. Purinton, A. M., Ph. D., M. D., St. Louis, Mo., physician. Formerly professor in University of Missouri.
W. A. Rogers, A. M., Cincinnati, Ohio, lawyer.
S. S. Wade, M. S., M. D., Morgantown, W. Va., physician.

1850.

Chas. E. Crozier, M. S., C. E., Chicago, Ill., engineer I. C. R. R.
R. L. [illegible], A. M., [illegible]
Rev. [illegible], D. D., [illegible] University of Ill., ex-State Senator, presiding elder.
Rev. A. A. Watts, A. M., Prof. Natural Sciences, Hedding College, Abingdon, Ill.

1851.

Thos. E. H. [illegible], A. M., [illegible], W. Va., principal State Normal School, Colored West Virginia School Journal.
Wm. H. [illegible], A. M., [illegible], Sandusky County, Ohio.
H. N. [illegible], A. M., Lake [illegible], Ill., lawyer.

1852.

T. B. [illegible], A. B., deceased.
Z. K. [illegible], A. M., [illegible], Virginia City, Nev., physician.
D. S. [illegible], A. M., [illegible], N. Y.
A. [illegible], A. M., [illegible]
[illegible], W. Va., farmer.
[illegible], D. D., [illegible] Presbyterian church.
J. H. [illegible], [illegible]
G. C. [illegible], A. M., [illegible]
Hon. [illegible], A. M., [illegible], W. Va., State senator, and member of the board of regents of West Virginia University.

1853.

George C. Robert, A. M., LL. B., Morgantown, W. Va., lawyer, prosecuting attorney for Monongalia county.
W. T. [illegible], A. M., [illegible], lawyer, mayor of city.
R. M. [illegible], A. M., [illegible]
[illegible], A. M., [illegible], dealer.
[illegible], A. M., [illegible], Professor of Chemistry, West Virginia University.
[illegible]
[illegible], University.
Walter Busch, A. M., [illegible], Smithsonian Institution, Washington, D. C.
John L. J. [illegible], A. M., [illegible], W. Va., Professor of Civil and Mining Engineering, West Virginia University.
J. G. [illegible], A. M., [illegible], W. Va., lawyer.
J. S. [illegible], A. M., [illegible], W. Va., [illegible]
S. P. Wells, Jr., A. M., [illegible], Cincinnati, Ohio.

1854.

William [illegible], M. S., [illegible], W. Va., State Agent of the West Virginia University; [illegible] "Old Dominion Virginian"; Recent West Virginia State Journal [illegible]
P. C. [illegible], A. M., [illegible], Ill., civil engineer 112 Monadnock block.
W. H. [illegible], A. M., New [illegible], lawyer.
R. L. [illegible], A. M., M. D., [illegible], Pa., lawyer.

1855.

N. D. Adams, A. M., deceased.
Robert [illegible], A. M., [illegible], W. Va., [illegible] dealer; member Board of Directors Western Reserve [illegible]
A. B. [illegible], A. M., [illegible], Pittsburgh, Pa., [illegible] Publishing co.
Harvey [illegible], A. M., Washington, D. C., [illegible] Press for the West.
B. W. [illegible], A. M., deceased.
Hon. J. D. Sweeney, A. M., Concord, W. Va., principal Concord State Normal School; ex-State Senator.
R. W. Tapp, A. M., deceased.

1886.

Robert A. Armstrong, A. M., Morgantown, W. Va., Professor of English, West Virginia University.
W. N. Berkeley, A. B., Ph. B., M. D., Frostburg, Md., physician.
R. W. Dawson, A. B., LL. B., Uniontown, Pa., lawyer.
T. R. Shepherd, A. B., LL. B., Huntington, W. Va., lawyer.
Rev. N. M. Waters, A. B., B. D., Evanstown, Ill., pastor M. E. church.
S. F. Yost, B. S., LL. B., Pontiac, Ill., lawyer, city attorney.

1887.

J. E. Charles, B. S., 19½ S. High St., Columbus, O., real estate dealer.
E. S. Elliott, A. B., LL. B., Chicago, Ill., lawyer, 1103 Home Ins. B'd'g.
B. C. Ogden, A. B., Wheeling, W. Va., editor "Evening News."
Thos. G. Rector, B. S., M. S., Argentine Republic, Signal service.
Leroy Swann, B. S., Connelsville, Pa., business.

1888.

James D. Cox, A. B., M. D.
H. H. Emmert, B. S., LL. B., Martinsburg, W. Va., lawyer.
Hon. C. Hartmeyer, A. B., LL. B., Bruceton, W. Va., lawyer.
Rev. H. H. Ryland, A. B., ———, Pa., pastor of Presbyterian church.
Frank Snider, A. B., Uniontown, Pa., teacher.
D. L. Jamison, A. B., LL., B., Gaston, Ind., pastor of Baptist church.

1889.

B. C. Alderson, A. B., post graduate student, University of Chicago.
J. E. Brown, B. S., LL. B., Chicago, Ill., lawyer, 1370 Unity Bld'g.
G. B. Chorpening, B. S., Clarksburg, W. Va., civil engineer.
Jas. E. Dawson, A. B., LL. B., Uniontown, Pa., lawyer.
Chas. N. Finnell, A. B., LL. B., Keyser, W. Va., lawyer.
G. G. Heiner, A. B., Washington, D. C., Lieut. U. S. A., 4th Artillery.
A. J. Hare, A. B., Morgantown, W. Va., instructor West Va. University.
J. A. Jackson, A. B., Denver, Colo., lawyer.
Rev. L. A. Lindemuth, A. B., Moosic, Pennsylvania, pastor Presbyterian church.
Chas. Rankin, B. S., Roanoke, Va., civil engineer, N. & W. R. R.
Rev. J. L. Roemer, A. B., Cleveland, O., pastor Presbyterian church, 153 Brainard avenue.
Rev. H. G. Stoetzer, A. B., Moredale, Pa., pastor Presbyterian church.

1890.

Harvey Brand, A. B., Morgantown, W. Va., principal city schools.
F. W. Clark, A. B., LL. B., New Martinsville, W. Va., lawyer.
L. J. Corbley, A. B., Morgantown, W. Va., graduate student, Halle University, Germany.
Bert H. Hite, B. S., Morgantown, W. Va., Chemist Agr. Experiment station.
W. F. Reynolds, A. M., Morgantown, W. Va.
E. H. Vickers, A. M., Charlestown, W. Va., post graduate student, Berlin University, Germany.
Rev. E. E. Woodson, A. B., Bridgeport, W. Va., pastor Baptist church.

1891.

Rev. A. B. Cooper, A. B., Columbus Junc., Iowa, pastor Presbyterian church.
J. E. Davis, A. B., LL. B., Chicago, Ill., lawyer, 1319 Unity building.
C. R. Duvall, B. S., Martinsburg, W. Va., post graduate student Johns Hopkins University, Baltimore.
J. E. Galford, B. S., LL. B., Weston, W. Va., lawyer.
U. S. G. Hayes, B. S., Morgantown, W. Va.
C. McC. Lemley, C. E. Pencoyd, Pa., with Pencoyd Iron Works.
T. D. Lynch, C. E., Chicago, Ill., civil engineer.
Hattie E. Lyon, A. B., (Mrs. Franklin Jewett,) Fredonia, N. Y.
M. D. Post, A. B., LL. B., Wheeling, W. Va., Lawyer.
F. G. Ross, C. E., Pittsburg, Pa., civil engineer.
J. R. Trotter, A. B., Buckhannon, W. Va., post graduate student, Harvard University.
Rev. Chas. L. White, A. B., pastor Presbyterian church, Clarksburg, W. Va.
Rev. P. C. White, A. B., Weston, W. Va., pastor Presbyterian church.
Rev. DeWitt White, A. B., Sistersville, W. Va., teacher.

1892.

G. M. Alexander, B. S., LL. B., Fairmont, W. Va., lawyer.
Carroll C. Coffman, B. S. C. E., Clarksburg, W. Va., civil engineer.
George M. Ford, A. B., student law department West Virginia University, Morgantown, W. Va.
Rev. J. W. Francis, A. B., Richland Centre, Wis., pastor Presbyterian church.
Ezra C. Garlow, B. S., C. E., Pittsburg, Pa., civil engineer.
John A. Grier, B. S., M. D., Ravenswood, W. Va., physician.
J. M. Hackney, A. B., Morgantown, W. Va., business.
J. T. Holbert, B. S. C. E., Ft. Defiance, Arizona T'y, civil engineer.
Rev. Hough Houston, A. B., B. D., Pine Bush, N. Y., pastor M. E. church.
Rev. Lin M. Jaco, A. B., LL. B., Morgantown, W. Va., teacher.
Charles B. Sisler, A. B., Senatobia, Miss., principal of Senatobia schools.
E. L. Zearley, B. S. C. E., Scottdale, Pa., civil engineer, with McClure Coke Co.

1893.

W. A. Burdett, A. B., Guyandotte, W. Va., principal city schools.
W. J. Eddy, A. B., student, Newton Theological Sem., Newton Centre, Mass.
C. W. Gore, A. B., student in Law Department, West Virginia University, Morgantown, W. Va.
Lulu Garlow, Philadelphia, Pa., post graduate student Bryn Mawr College.
S. W. Graham, A. B. Tampa, Florida, lawyer.
Lillian Hackney, A. B., Huntington, W. Va., teacher in Marshall College.
E. T. Hartman, A. B., Kingwood, W. Va.
W. C. Meyer, A. B., LL. B., (Yale) Wheeling, W. Va., lawyer.
Sarah L. Norris, A. B., (Mrs. E. Showalter), Fairmont, W. Va.
A. H. Sheppard, A. B., Elizabeth, W. Va., teacher.
A. B. Smith, A. B., Uniontown, Pa.
Altha Warman, A. B. Keyser, W. Va., teacher.
Braxton Davenport, B. S., Cleveland O., 201 Cuyahoga B'ld'g, lawyer.
F. M. Minshall, B. S. C. E., New York city, civil engineer.

1894.

Robert E. L. Allen, A. B., LL. B., Morgantown, W. Va., lawyer.
Macker Babb, A. B., Medley, W. Va., farmer.
John T. Cooper, B. S., Parkersburg, W. Va., post graduate student in Chemistry, at Harvard.
G. Fred Dorsey, A. B. Pittsburg, Pa., business.
Joseph L. Henderson, A. B., Tyler Texas, principal of schools.
John W. Hughes, B. S. C. E., Allegheney, Pa., civil engineer P. McK. & Y. R. R.
Sam. R. Jenkins, B. S. C. E., Grafton, W. Va., civil engineer.
Jas. W. Johnson, B. Agr. post graduate student at Cornell, Ithica, N. Y.
Hon. Geo. W. Johnson, A. B., LL. B., Martinsburg, W. Va., lawyer, Regent of State Normal Schools.
Clement R. Jones, B. S. C. E., Instructor in Dept. Mechanical Engineering, West Virginia University, Morgantown, W. Va.
Chas. E. Krebs, B. S. C. E., New Martinsville, W. Va., engineer Elk River Railroad.
John Nuzum, A. B., LeRoy, W. Va., teacher.
Jas. W. Paul, B. S. C. E., Thomas, W. Va., engineer and chemist for Davis Coal and Coke Co.
Robert H. Ramsey, A. B., medical student in University of Pennsylvania.
Kemble White, A. B., Belton, W. Va., merchant.
John W. Wiles, A. B., Morgantown, W. Va., real estate dealer.

1895.

W. B. Cutright, A. B., Assistant in Preparatory Department, West Virginia University, Morgantown, W. Va.
C. E. Carrigan, A. B., Wheeling, W. Va., Principal Upper Benwood School.
T. L. Davies, A. B., Glenville, W. Va., First Assistant, Glenville State Normal School.
M. E. Gorman, A. B., Rivesville, W. Va., teacher.
W. J. Holden, A. B., Glenville, W. Va., Principal Glenville State Normal School.
S. S. Jacob, Jr., A. B., West Liberty, W. Va., Assistant in West Liberty State Normal School.
G. H. A. Kunst, M. B., Weston, W. Va., assistant in Weston schools.
U. S. G. Kendall, A. B., Fairmont, W. Va., lawyer.
T. M. Lavelle, B. S. C. E., Pencoyd, Pa., with Pencoyd Iron Works as engineer.
Russell Morris, B. S. C. E., Morgantown, W. Va., assistant in Civil Engineering Department, West Virginia University.
P. B. Martin, B. S., Kingwood, W. Va., teacher.
J. B. Protzman, A. B., Morgantown, W. Va., teacher, Rock Lick, W. Va.
C. N. Ridgway, A. B., Hospital, Ill., sec'y to sup't of Ill. hospital.
Silas Stathers, B. S. C. E., Wheeling, W. Va., assistant city engineer.
J. F. Strader, A. B., Law Student in West Virginia University, Morgantown.
Anna White, B. S., Morgantown, W. Va.
Stella White, B. S., Morgantown, W. Va.

LAW GRADUATES.

1879.

William R. Thompson, Huntington, W Va.

1880.

Frank T. Haymond deceased.
Waitman T. Houston, Morgantown, W. Va.

1881.

E. W. Bedinger, Jr., Middletown, Ky.
Samuel O. Kelly, deceased.

1882.

Arthur L. Cox, A. B., Texas.
L. C. Tabb, Bluefield, W. Va., attorney and land agent.

1883.

Frank Cox, Morgantown, W. Va.
S. A. Hays, Glenville, W Va.
Melville Peck, Philippi, W. Va., prosecuting attorney.
William Rich, Pleasanton, Kansas.
John W. Wiltshire, Charles Town, W. Va., deceased.

1884.

Meles Bland, Clarksburg, W. Va.
W. T. Bland, M. S., Atcheson, Kansas.
J. F. Cork, A. M., Charleston, W. Va.
I. G. Lazzell, A. M., Morgantown, W. Va.
Hon. B. S. Morgan, A. M., Charleston, W. Va.

1885.

B. L. Keenan, A. M., Witchita, Kansas.
F. Lively, Hinton, W. Va
Hon. Jas. H. Stewart, A. M., Raymond City, W. Va., State Senator and Regent of W. V. U.
H. J. Sturgiss, Oklahoma Territory, lawyer.

1886.

George C. Baker, A. M., Morgantown, W. Va., prosecuting attorney.
L. M. Boyers, A. M., deceased.
George E. Boyd, Wheeling, W. Va.
C. B. Dille. A. M., Morgantown, W. Va.
R. E. Fast, Morgantown, W. Va.
S. M. Musgrove, Grafton, W. Va.
H. L. Robinson, A. M., Uniontown, Pa.

1887.

. E. L. Blackwood, Lock Seven, W. Va.
. W. Dawson, A. B., Uniontown, Pa.
S. Elliott, A. B , Chicago, Ill.
H. Keenan, Elkins, W. Va.
M. McGrath, Princeton, W Va.
. L. Romine, Clarksburg, W Va.
on. E. P. Rucker, Welch, W. Va., Regent West Virginia University.
W. Smith, Maidsville, W. Va , deceased.
. F. Snider, West Union, W. Va.

1888.

Charles A. Clark, Everett, Washington.
Alexander Dupuy, Cameron, Cameron Parish, La.
Melville H. Fleming, A. B., Crete, Nebraska.
Lewis C. Lawson, Clarksburg, W Va.
R K. McComb ——— ———
A. F. Morris, Hamlin, W. Va.
Geo. I Neal, Huntington, W. Va , ex-mayor of city.
U S. G. Pitzer, Martinsburg, W. Va., prosecuting attorney.
Thos. R. Shepherd, A. B , Huntington, W. Va.
T. J. Woofter, Prof. Mathematics, Mercer University, Macon, Ga.

1889.

W. M. B. Cornwell, Romney, W. Va., prosecuting attorney.
N. C. McNeil, Marlinton, W. Va.
W. L. P. Peyton, Ogden, Utah.
Hon. Stuart F. Reed, Clarksburg, W. Va., editor "Telegram," State Senator, Pres. West Virginia Editorial Association, Regent West Virginia University.
Ed. G. Smith, Clarksburg, W. Va.
J. F. Wilson, Grafton, W. Va.
Thos. Y. Yates, Grafton, W. Va.

1890.

A. S. Alexander, Winfield, W. Va., Putnam county, prosecuting attorney.
J. E. Chipley, Moorefield, W. Va.
F. H. Garrett, Ohio.
D. L. Jamison, A. B., Grafton, Ind., pastor of Baptist church.
Rob't. L. Keadle, Union, W. Va., prosecuting attorney.
Tucker H. Ward, Huttonsville, W. Va., farmer and stock breeder.

1891.

Benjamin F. Bailey, Grafton, W. Va.
S. E. Boggess, Spencer, W. Va., prosecuting attorney.
Lynn Brannon, Glenville, W. Va.
Jas. E. Brown, B. S., Chicago, Ill.
W. L. Camden, Baltimore, Md., 5 E. Lexington street.
Frank W. Clark, A B , New Martinsville, W. Va.
L. J. Cobun, Philippi, W. Va., deceased.
T. J Cummings, Weston, W. Va.
Jas. E. Davis, A. B., Chicago, Ill.
Jas. E. Dawson, A. B., Uniontown, Pa.
W. E Hines, Sutton, W. Va.
R. E. L. Hutchinson, Huntington, W. Va.
C. E. Morris, Wheeling, W. Va.
E. H. Morton, Addison, W. Va.
W. S. O'Brien, Buckhannon, W. Va.
C. B Riggle, Middlebourne, W. Va.
J. B. Settle, Fayetteville, W. Va.
C. R. Summerfield, Fayettville, W. Va.

1892.

Geo. M. Alexander, A. B., Fairmont, W. Va.
John A. Bell, Richmond, Ky., pension examiner
Cary M. Bennett, Glenville, W. Va.
John J. Carney, Oklahoma
John S. Cogar, Addison, W. Va.
John R. Darrah, Washington, Pa.
Richard L. Fleming, Fairmont, W. Va.
C. B. Hall, Morgantown, W. Va.
J. W. Harman, Petersburg, W. Va.
Hon. H. W. Harmer, Clarksburg, W. Va., member of legislature and Normal School Regent.
J. C. Herndon, Welch, W. Va.
W. Kanoku, Japan.
I. K. Mottingly, Parkersburg, W. Va.
J. H. Morris, Parkersburg, W. Va.
C. M. Murphy, Philippi, W. Va.
A. S. Poling, Philippi, W. Va., editor "Barbour Democrat."
M. D. Post, A. B., Wheeling, W. Va.
A. G. P. Price, Marlinton, W. Va.
E. M. Showalter, Fairmont, W. Va.

1892-3.

C. M. Alderson, Charleston, W. Va.
B. W. Chambers, Spencer, W. Va.
O. J. Chambers, Spencer, W. Va.
W. G. Conley, Parsons, W. Va.
S. H. Day, B. D., D. D., St. Augustine, Fla.
C. N. Finnell, Keyser, W. Va.
S. F. Glosscock, Morgantown, W. Va.
J. G. Gorman, Morgantown, W. Va.
M. LeMasters, Cross Roads, W. Va.
C. R. Martin, Middlebourne, W. Va.
R. E. Talbot, Philippi, W. Va.
B. E. Warne, Washington, Pa,
Z. F. Yost, Pontiac, Ill., city attorney.

1893-4.

G. W. Bland, West Union, W. Va.
H. B. Davenport, Clay C. H., W. Va., mayor of town.
C. Hartmeyer, A. B., Princeton, W. Va.
J. E. Galford, A. B., Weston, W. Va.
G. W. Johnson, A. B., Martinsburg, W. Va., Regent State Normal Schools.
J. H. Lazear, West Liberty, W. Va.
C. W. May, Hamlin, W. Va.
J. C. McWhorter, Buckhannon, W. Va.
Jerome Dudding, Winfield, W. Va.
H. A. Steed, Sistersville, W. Va.
P. M. Summers, Clay C. H., W. Va.
J. H. Collins, Uniontown, Pa.
S. Halstead, Kester X Lanes, W. Va.
O. A. Hood, Maysville, W. Va.
C. A. Goodwin, Morgantown, W. Va.
W. B. Kittle, Philippi, W. Va.
I. Lowenstein, Charleston, W. Va.
Wm. MacDonald, Keyser, W. Va.
F. S. Miller, Dunkard, Pa.
E. S. Nolan, Stock Yards, W. Va.
H. A. Somerville, Elizabeth, W. Va.
W. H. Sawyers, Hinton, W. Va.
C. Wilson, Ritchie C. H., W. Va.

1894-5.

R. E. L. Allen, A. B., Morgantown, W. Va.
L. H. Barnett, Market, W. Va.

L. D. Beall, Uniontown, Pa.
F. C. Cox, Wheeling, W. Va.
R. L. Clarke, Union, W. Va.
S. R. Davis, Morgantown, W. Va.
W. Grablachoff, Tulchas, Roumania.
L. Greynolds, Beverly, W. Va.
W. J. Holden, A. B. Glenville, W. Va.
A. J. Holder, Bellows Falls, W. Va.
A. D. Ireland, White Oak, W. Va.
L. M. Jaco, A. B. Morgantown, W. Va.
H. M. Lockridge, Huntersville, W. Va.
Tokichi Masao, Japan.
G. W. McCouley, Hanging Rock Mills, W. Va.
J. T. McDonald, Mann, W. Va.
C. S. Morrison, Bellaire, Ohio.
Agnes Morrison, Bellaire, Ohio.
W. E. Patterson, Wheeling, W. Va.
C. J. Poe, Buckhannon, W. Va.
D. C. Reay, Morgantown, W. Va.
G. B. Scott, Wemelsdorf, W. Va.
H. Shaw, Morgantown, W. Va.
E. J. Somerville, Point Pleasant, W. Va.
B. F. Sterling, Masontown, Pa.
W. T. Talbot, Philippi, W. Va.
J. T. Wilson, Belleville, Pa.

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1892-1896